

SIMPLANT®

Training manual



SIMPLANT®

NOTE:

This training manual is designed to kick start the hands-on practice of the SIMPLANT software.

The manual contains numerous screenshots showing you - feature per feature - exactly where to click and what do to in the SIMPLANT software.

This manual contains both SIMPLANT Planner (treatment planning) and SIMPLANT Pro (treatment planning and segmentation) features. Specific Pro features can be found on the following pages :

pp 15-39 segmentation techniques

pp 41-46 Dual Scan wizard

pp 47-53 Optical Scan wizard

Parts that are exclusively useful for SIMPLANT Pro users will be indicated with the following icon :

SIMPLANT® Pro

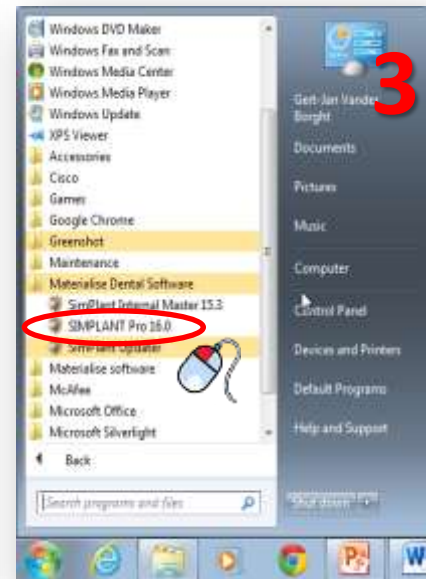
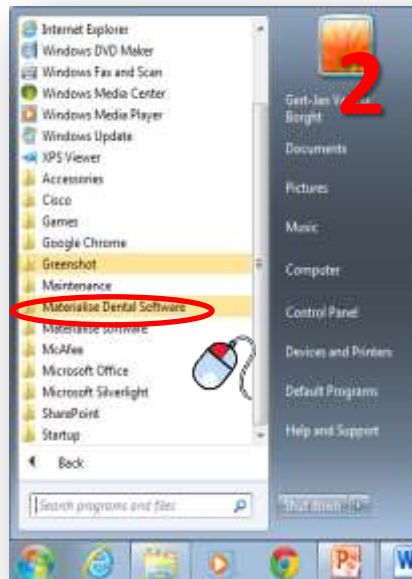
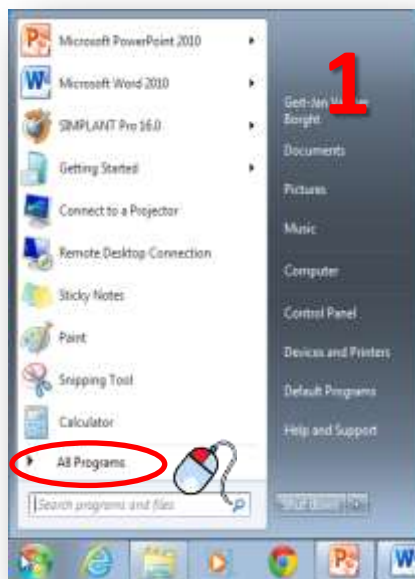
A. Start the SIMPLANT[®] application



To start the SIMPLANT application, double-click the SIMPLANT icon on your desktop.



You can also start the SIMPLANT application from the Windows 'Start Menu'. In the Start Menu, select 'All Programs' (1). From the list of programs, select the 'Materialise Dental Software' folder (2). Finally, select the SIMPLANT icon (3).



B. The SIMPLANT® user interface



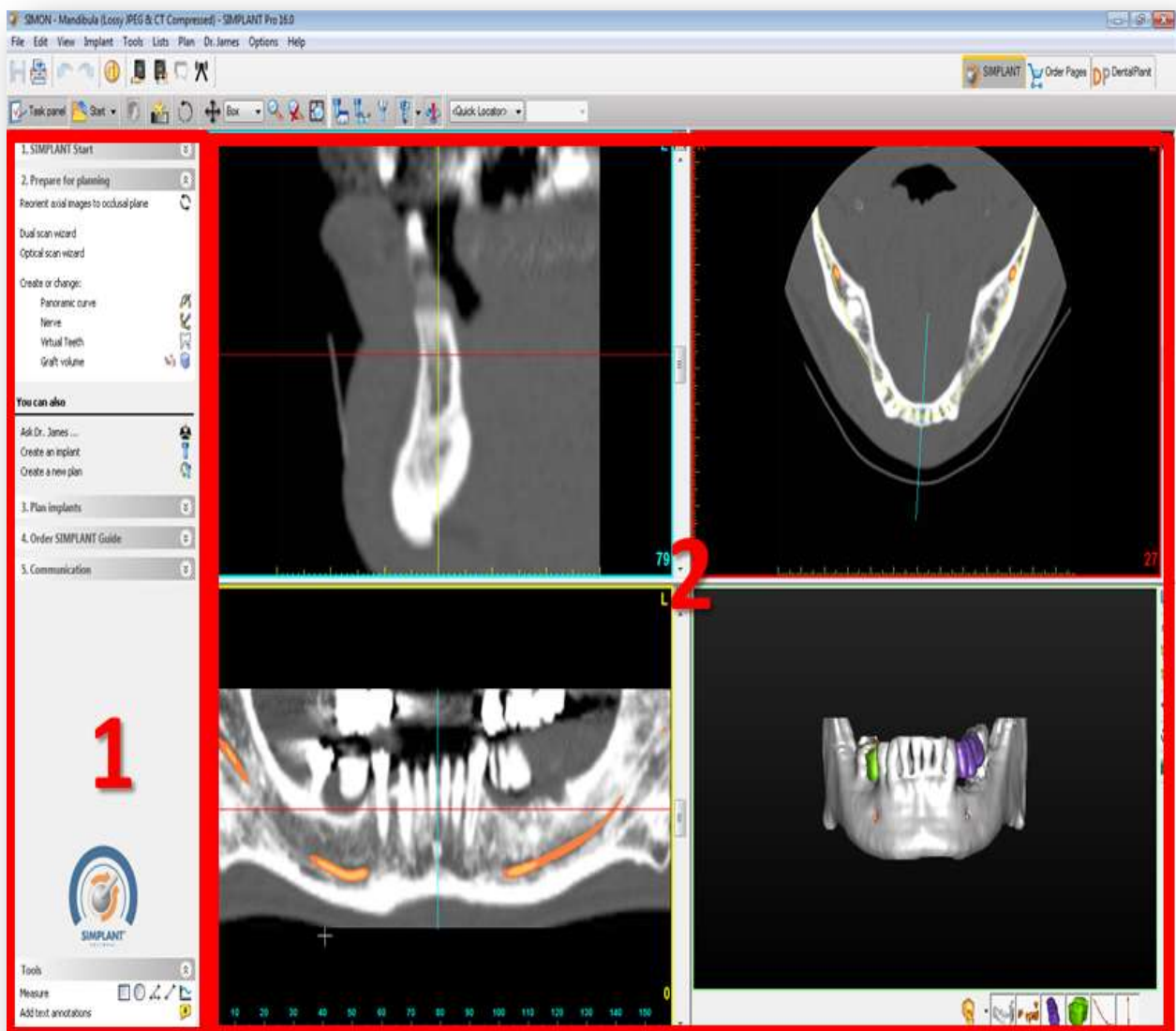
When you open an existing SIMPLANT project, the screen below appears. In this screen you can distinguish two important areas:

(1) The 'Task Panel':

The Task panel guides you step by step through the SIMPLANT application. In this manual we will be using the Task Panel for practically every functionality.

(2) The four view windows:

By default, SIMPLANT displays four view windows – three 2D views and one 3D view.

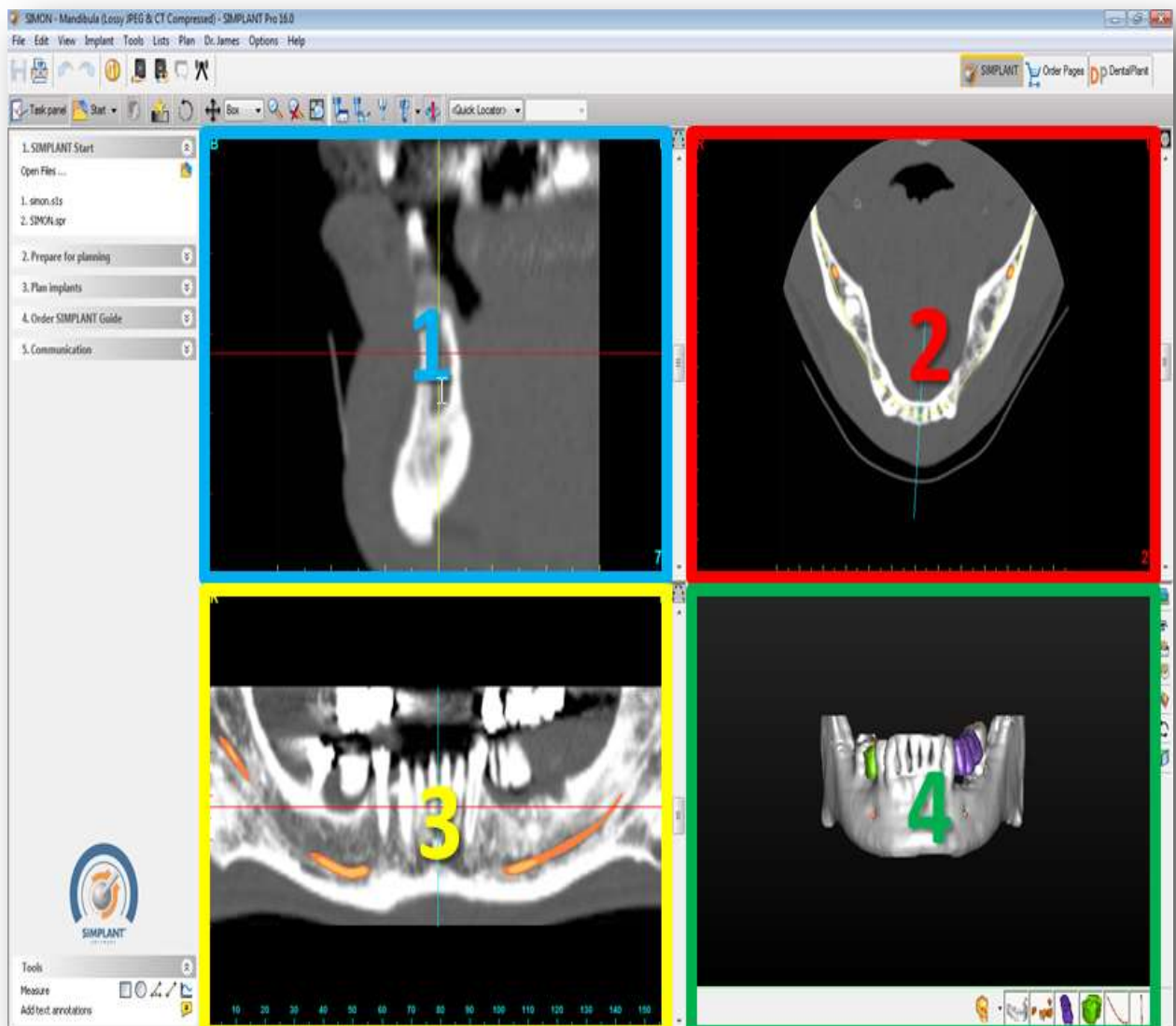


C. The view windows



Each of the four view windows has a separate color code:

- (1) The **cross-sectional** view (top left window): This view shows the 2D cross-sectional slices.
- (2) The **axial** view (top right window): This view shows the 2D axial slices.
- (3) The **panoramic view** (bottom left window): This view shows the 2D panoramic slices.
- (4) The **3D** view (bottom right window): This view shows the 3D model.

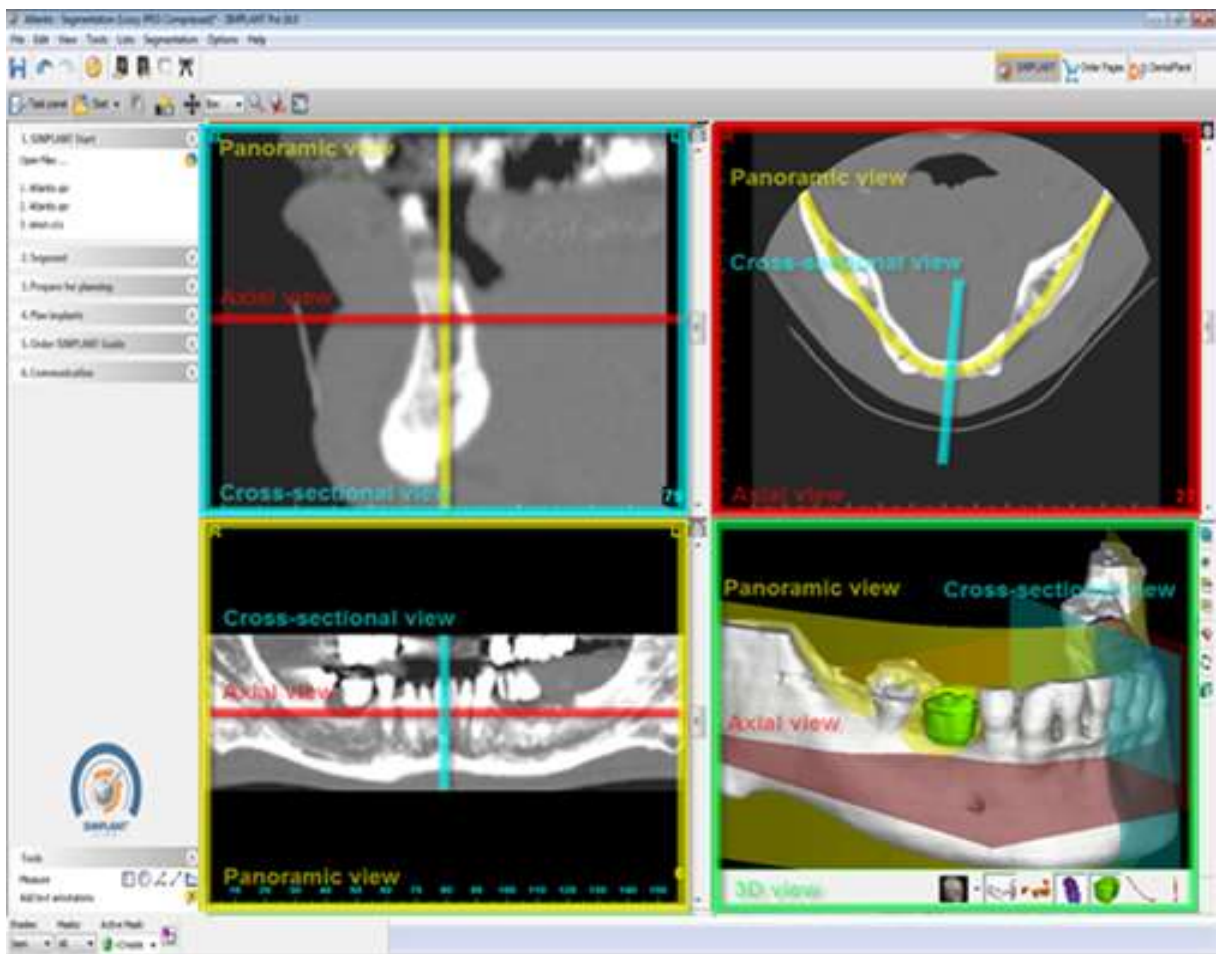


C. The view windows



Around each of the four view windows you can see a colored border. In the three 2D view windows you can also notice colored lines. Each of these lines represents a view. For example, the cross-sectional view window has a blue border and is visible as a blue line in the axial view window and the panoramic view window.

Notice that when you click a random point in one of the 2D view windows, the other 2D view windows automatically jump to the slice on which this point is positioned. The same functionality is present in the 3D view window. When you click a point on the bone model here, the three 2D view windows automatically jump to the slice on which this point is positioned.

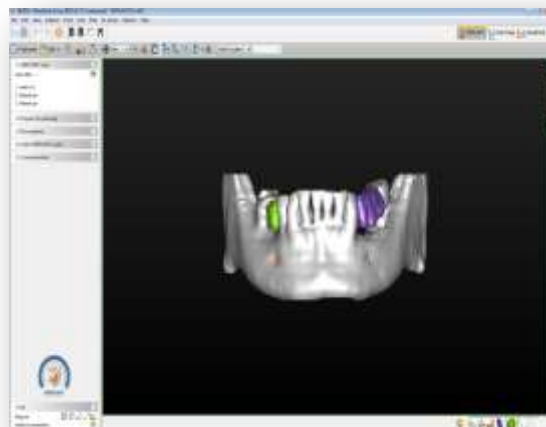
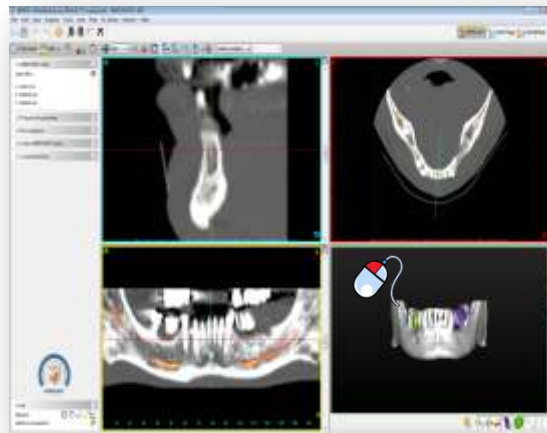
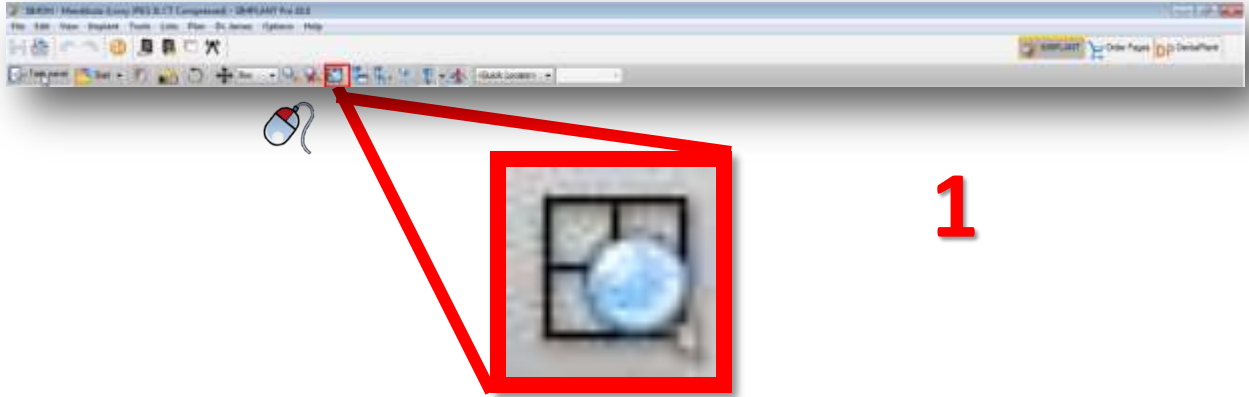


D. View navigation

1. Zoom to fullscreen



To get a more detailed look of each of the four view windows, you can zoom to full screen. You can zoom to full screen by clicking the '*Zoom to Full Screen*' icon in the SIMPLANT menu bar (1). Afterwards, click with the left mouse button in one of the four view windows (2). The window is now zoomed to full screen (3). Click the '*Zoom to Full Screen*' icon a second time to zoom out again.



D. View navigation

2. Scroll through the slices in the 2D view windows



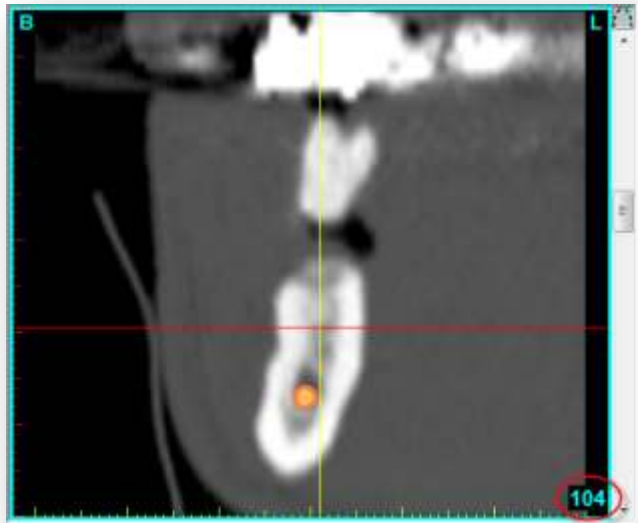
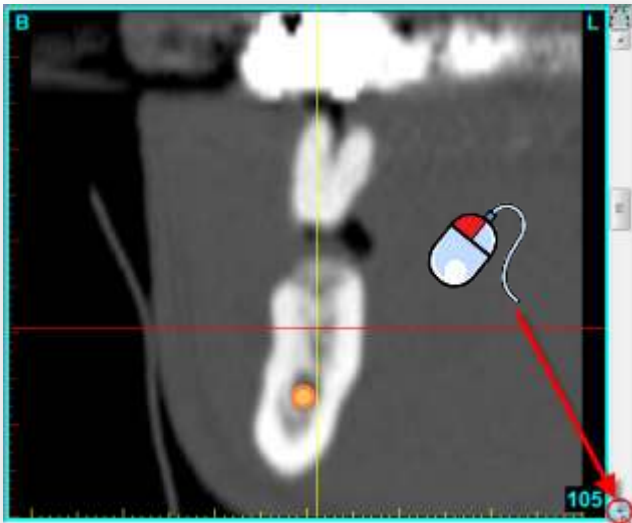
In the 2D view windows you can easily scroll through the different slices. There are two alternatives to scroll through the slices:

- A Use the slider bar
- B Use the mouse wheel button

A. Use the slider bar



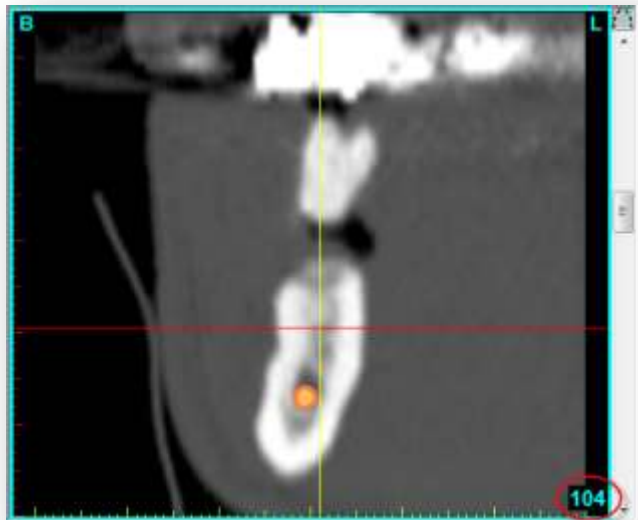
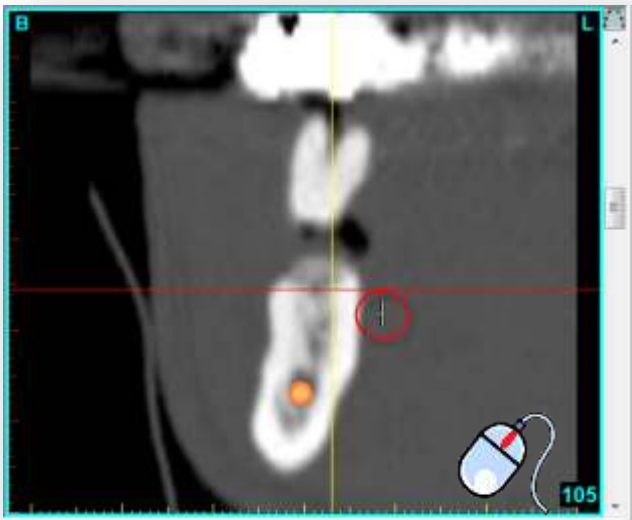
In the 2D view windows you can use the slider bar to scroll through the slices.



B. Use the mouse wheel button



Position the mouse cursor somewhere in the 2D view window area and scroll the mouse wheel to scroll through the slices.

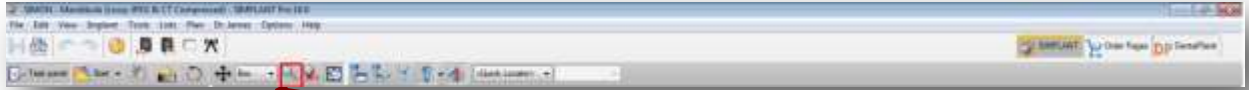


D. View navigation

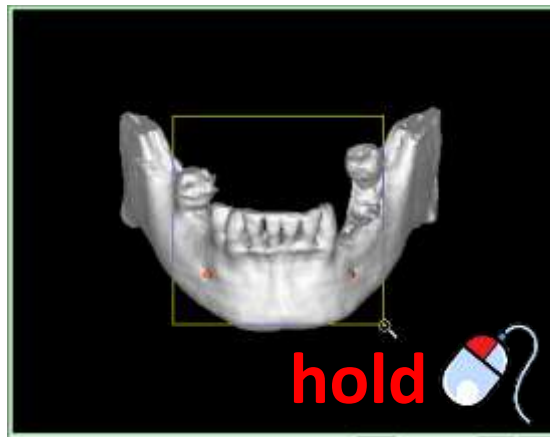
3. Zoom in



To get a better look in each of the four view windows, you can zoom in on the images. First, click the 'Zoom' icon in the SIMPLANT menu bar (1). In one of the view windows, click and hold the left mouse button and drag a square around the area that you would like to zoom in on (2). When you release the mouse button the zoom function is applied (3).



1



2



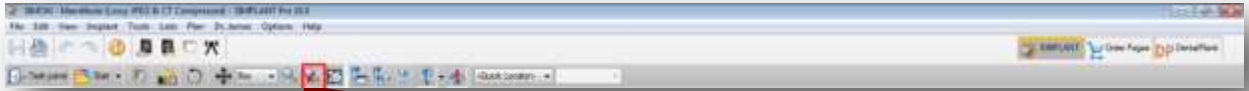
3

D. View navigation

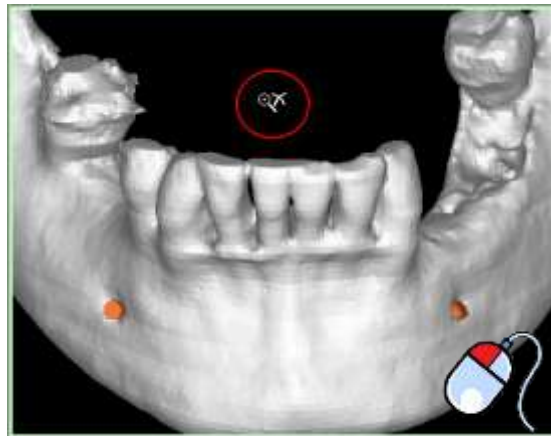
4. Unzoom



To zoom out again, first click the '*Unzoom*' icon in the SIMPLANT menu bar (1). Click with the left mouse button somewhere inside the view window (2). The view window is now zoomed out again (3).



1



2



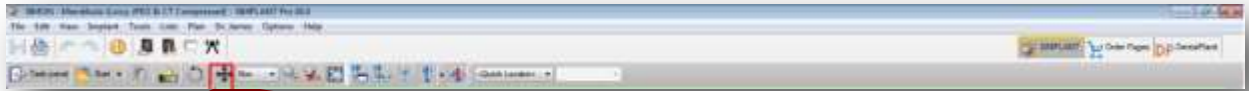
3

D. View navigation

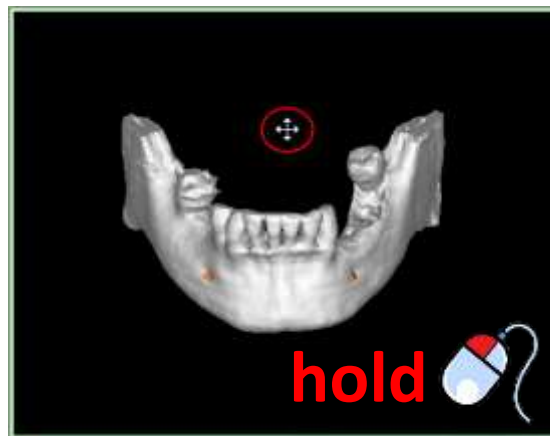
5. Pan



To pan the view, first click the '*Pan Once*' icon in the SIMPLANT menu bar (1). Position the mouse cursor somewhere in the view window and click and hold the left mouse button while dragging the mouse to pan the view (2). Release the mouse button to finish (3).



1



2



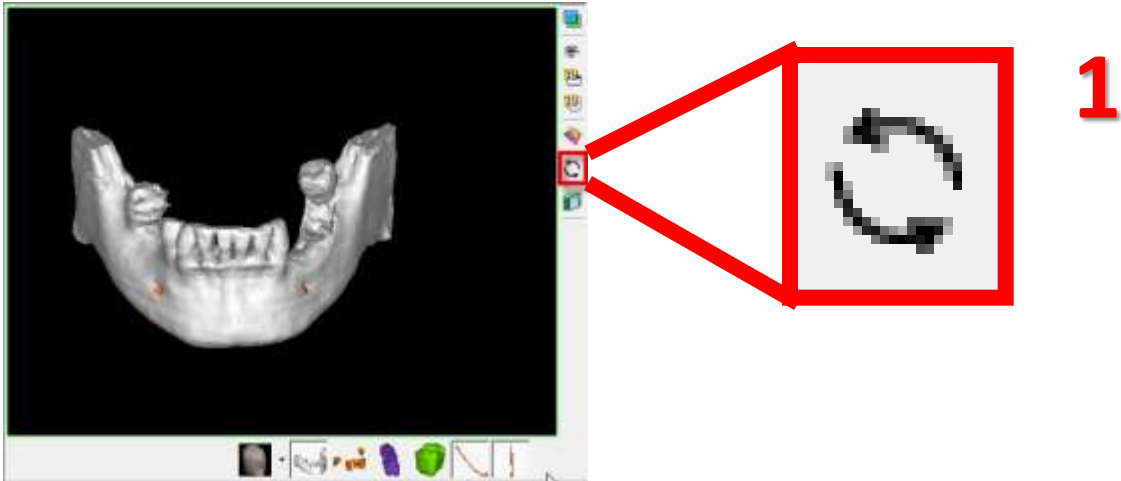
3

D. View navigation

6. Rotate



To rotate the view, first click the '*Rotate Once*' icon on the right side of the 3D view window (lower right window) (1). Position the mouse cursor somewhere in the view window and click and hold the left mouse button while dragging the mouse to rotate the view (2). Release the mouse button to finish (3).



E. Task Panel



The Task Panel guides you through every step of the software. In the rest of this manual we will explain the step by step typical workflow of a SIMPLANT project using the Task Panel. The Task Panel consists of following steps:

1. SIMPLANT® Start:

Here you can open an existing SIMPLANT project file or start a new SIMPLANT Project by importing CT images.

2. Segment: SIMPLANT® Pro

In SIMPLANT you have to create a 3D model from the 2D CT images before you can start your implant planning . This is called a “segmentation” and can be done using this part of the Task Panel.

3. Prepare for planning:

In this step you can draw a panoramic curve, draw a nerve, place Virtual Teeth or place a bone graft.

4. Plan implants:

In this step the actual planning of the implants takes places. Draw, specify and modify the implants that you would like to use in your project.

5. Order SIMPLANT® Guide:

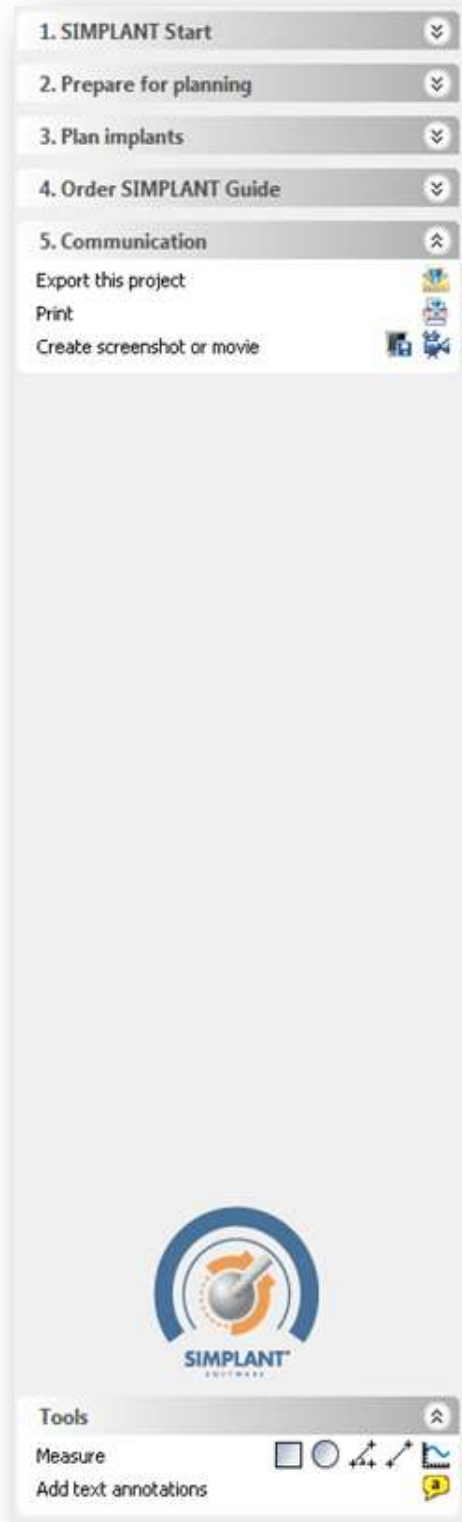
After you have finished your implant planning, you can design and order a SIMPLANT Guide through the Online Shop.

6. Communication:

Export your project to the SIMPLANT View format, Print your project or create a screenshot or movie of it.

Tools:

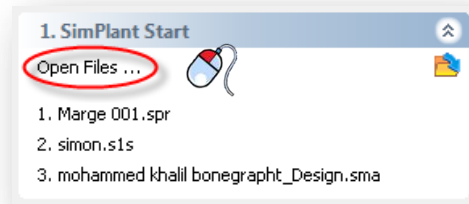
These tools can be used for making measurements in your project (bone density, distance, angulation).



1. SIMPLANT® Start



A To start a new SIMPLANT project, click *'Open Files'*.



B You can either work with an existing project or import new CT images:

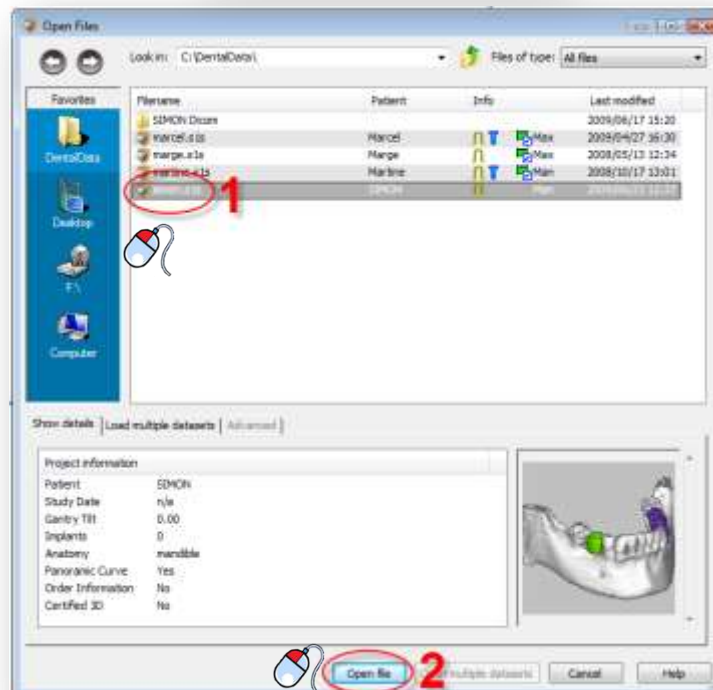
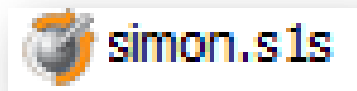
A Open an existing project.

B Import new CT images.

A. Open an existing project




Select the file you would like to open from the list (1) and click *'Open file'* (2). Note that the default location for storing SIMPLANT projects is "C:\DentalData".

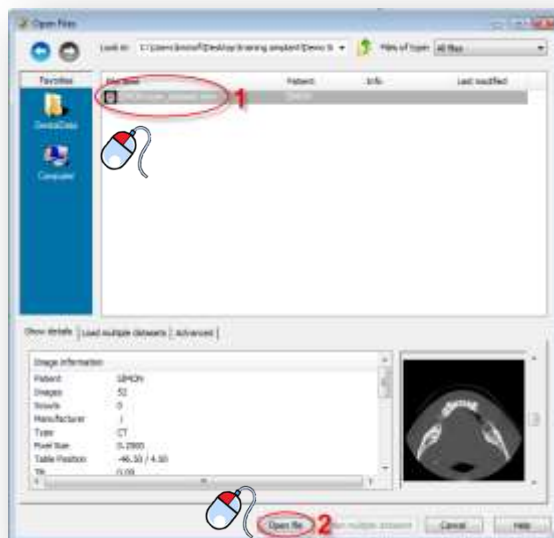




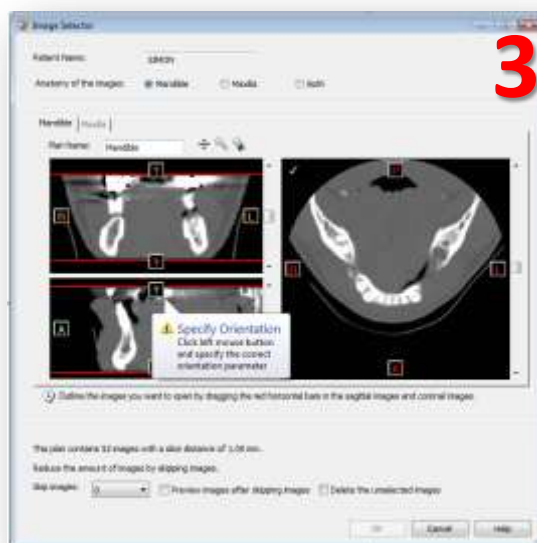
Navigate to the folder on your computer where the CT images that you want to import are stored. Select the “.dcm” file (1) and click ‘Open file’ (2) to import the images.



 SIMON scan_dataset.dcm



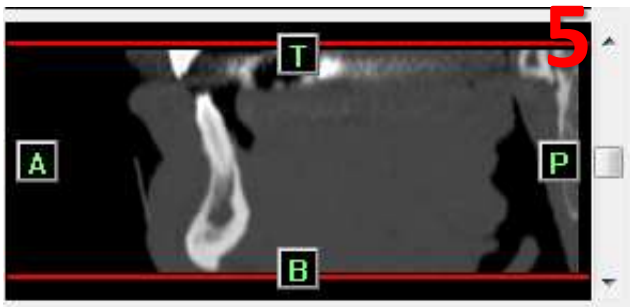
The ‘image selector’ window opens up (3). Here you can select which CT images you want to include in your SIMPLANT project.




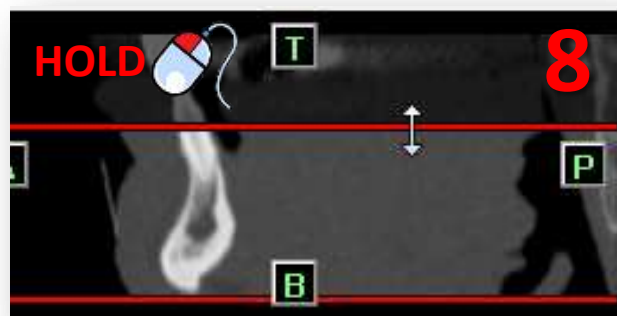
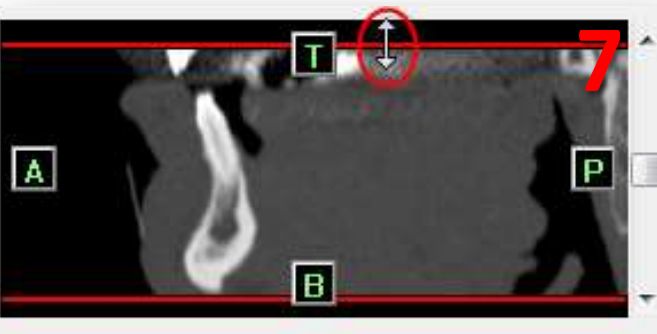
First, select the anatomy of the images: Mandible, Maxilla or Both (4).



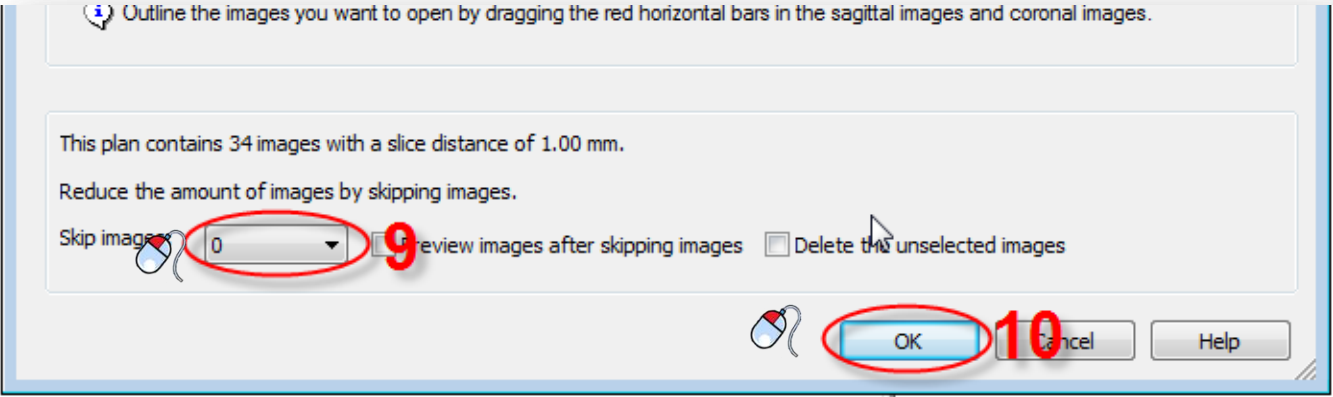
SIMPLANT will enter the orientation of the CT images (5). Click **T** or **B** and select 'Top' or 'Bottom' to change the orientation (6). If the orientation is not included in the image data you will have to enter it yourself.



Hold your mouse cursor over one of the red lines until the  icon appears (7). Click and hold the left mouse button and drag the mouse cursor to move the red line (8). This changes the area of CT images that will be included in the SIMPLANT project.



Select whether you would like to skip images or not (9) and click 'OK' to import (10).



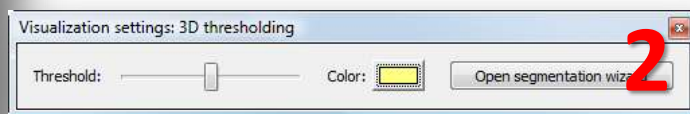


2.1. Advanced volume rendering

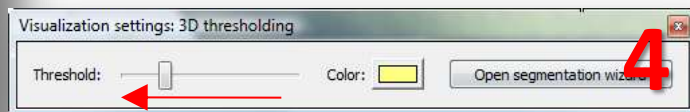
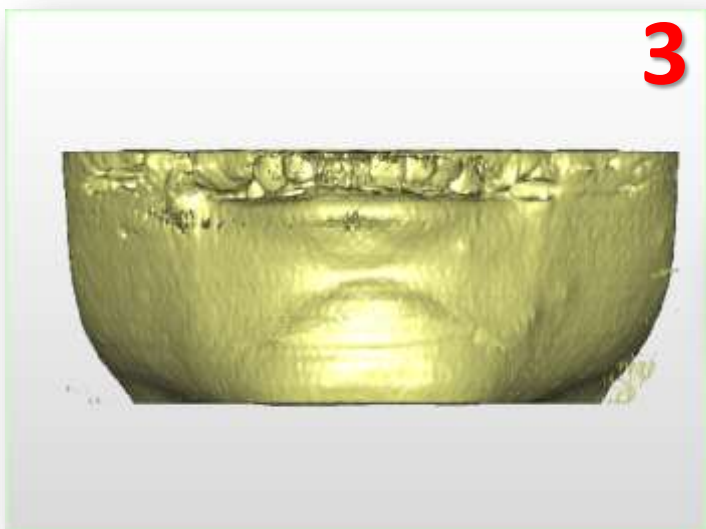
In SIMPLANT, there is an 'advanced volume rendering' 3D visualization tool. This feature immediately shows an excellent 3D visualization without the use of the conventional segmentation tools.

NOTE: Please take a look at the DVD cover for indications on the system requirements required for this feature. This feature requires a high quality video card. If your computer does not support this feature, you will be able to work with the standard volume rendering tool.

When you import Dicom images in SIMPLANT, the '3D thresholding' is automatically generated (1). The toolbar 'Visualization settings 3D thresholding' is also displayed (2).

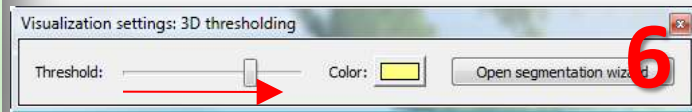


You can change the threshold value to show soft tissue (3). To do this drag the 'Threshold' slider to the left (4).

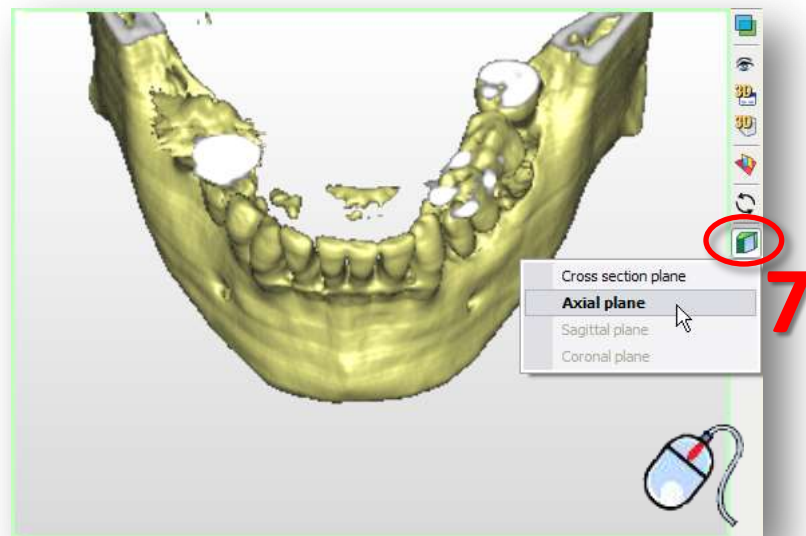




You can change the threshold value to show the teeth (5). To do this drag the 'Threshold' slider to the right (6).



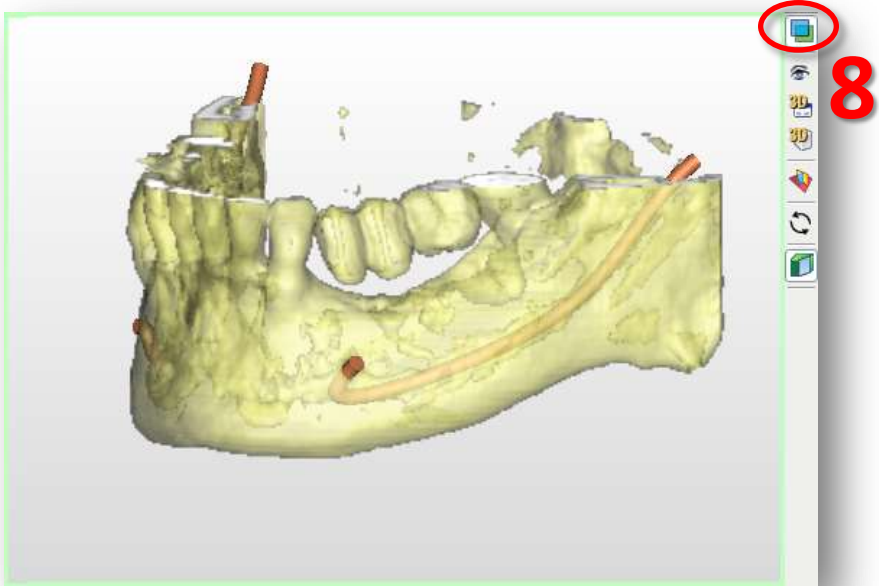
You can use the clipping tool (7) to remove the upper teeth and see the occlusal plane of the mandible teeth. Use the scroll wheel to move the clipping plane up or down



You can use the transparency tool to visualize the anatomical structures or implants planned.



You can use the transparency tool (8) to visualize the anatomical structures or implants inside the bone.

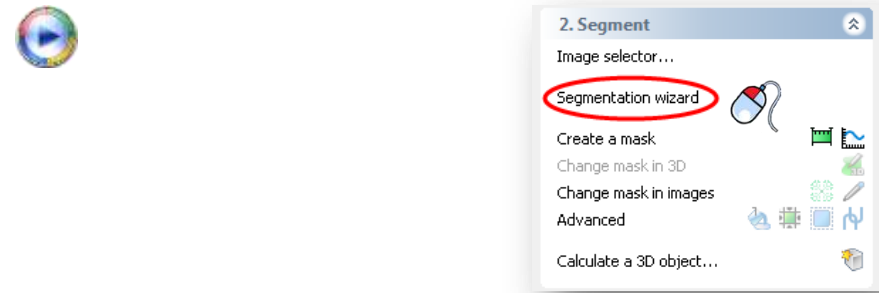


You can also generate a '3D X-ray'. In the lower right of the screen click the arrow next to the small skull icon (9). From the pop-up menu select '3D X-ray' (10). Now the 3D X-ray object is visible. You can rotate the X-ray object to view it from different angles (11).



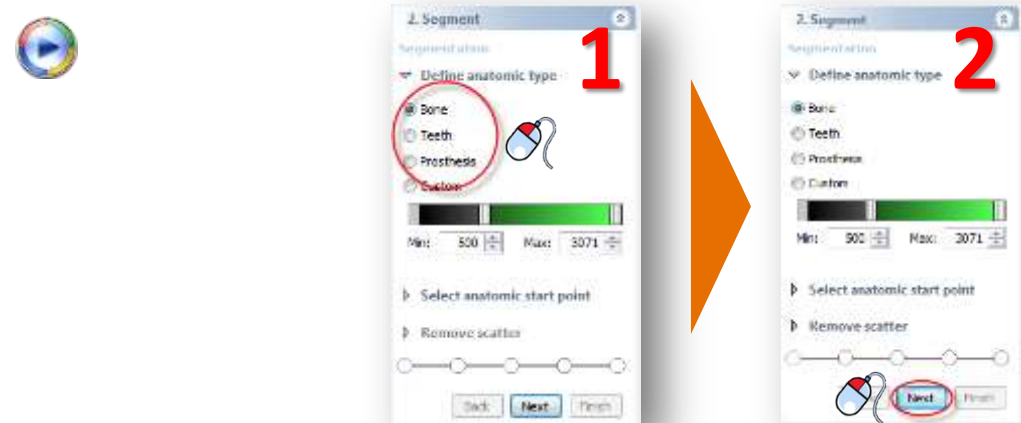


In the previous step we have imported CT images into SIMPLANT. The first thing we need to do is create a 3D model from these 2D CT images. This process is called *'segmentation'*. We will perform this segmentation by using the *'Segmentation wizard'*.

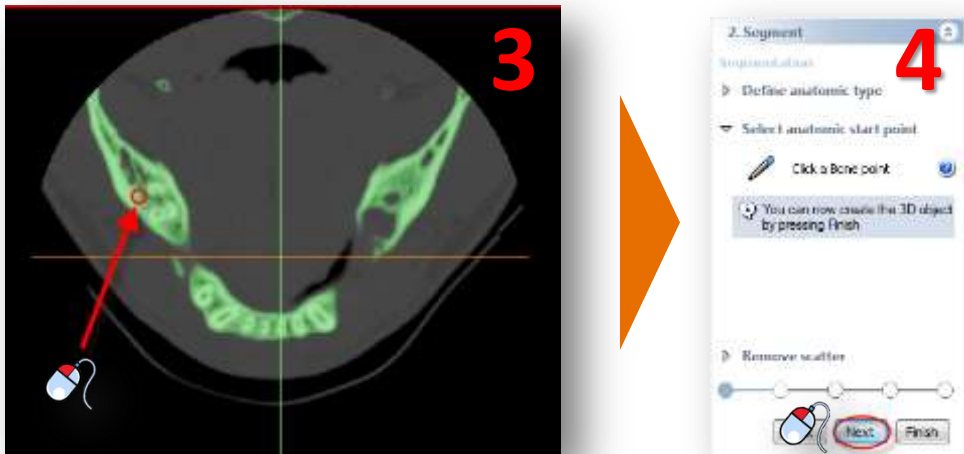


The Segmentation Wizard

Define the type of anatomy that you would like to segment: the bone model, the teeth or the prosthesis (1) and click 'Next' to continue (2).

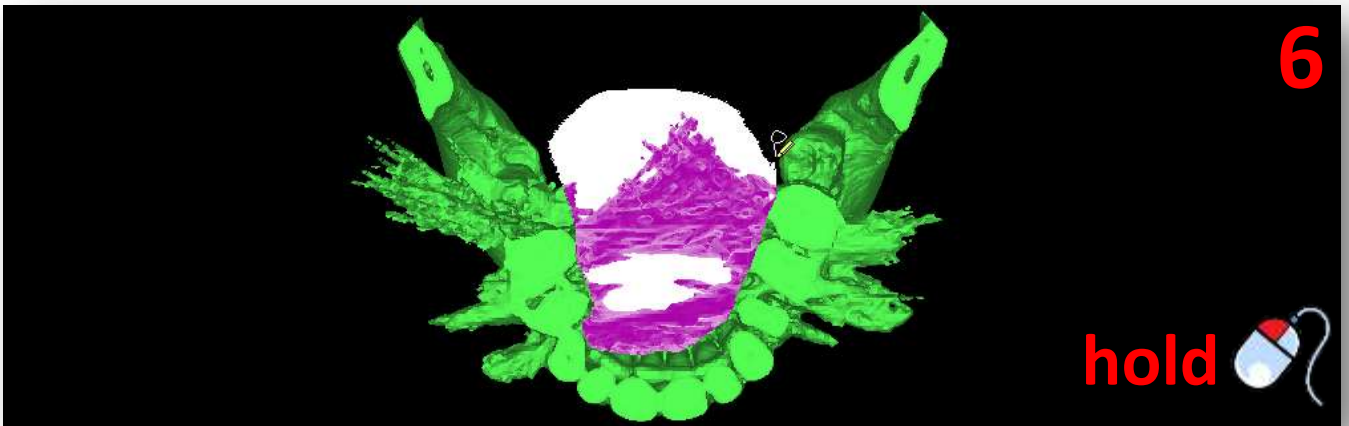
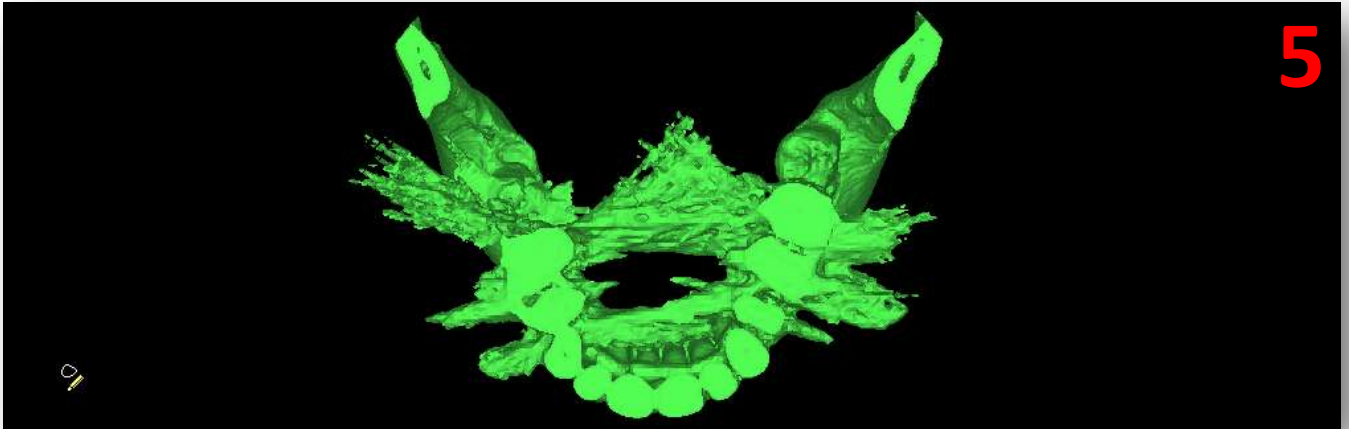


Click an internal bone point in one of the axial slices (3) and click 'Next' to continue (4).





The next step is to remove the scatter in the 3D model. SIMPLANT zooms the 3D view window to fullscreen (5). To remove the scatter, click and hold the left mouse button and drag a circle around the area that you would like to remove (6). Release the mouse button to finish (7).

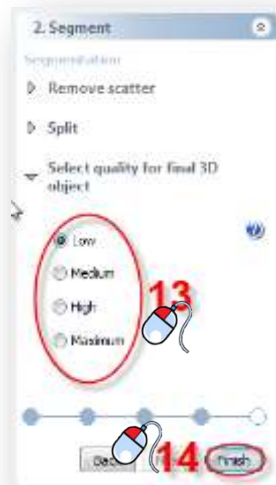




After removing the scatter you can split the 3D model in two separate models: one for the bone and one for the prosthesis (8). Rotate the 3D model in a way that you have a clear view on the scan prosthesis (9). Click and hold the left mouse button and drag a circle around the area that you would like to remove to separate the scan prosthesis (10). Release the mouse button to finish the operation (11). The separated 3D model now has a different color. Click 'Next' to continue to the final step of the Segmentation Wizard (12).



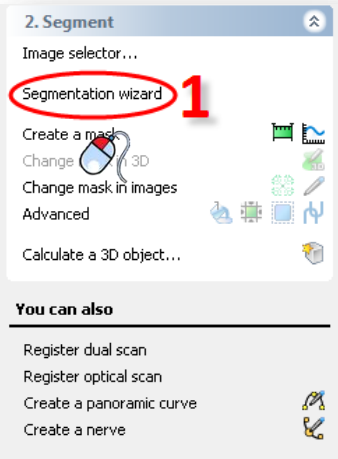
To finalize the 3D model select the quality of the model (13) and click 'Finish' (14).



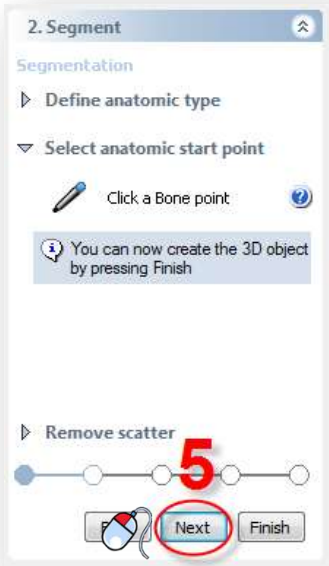
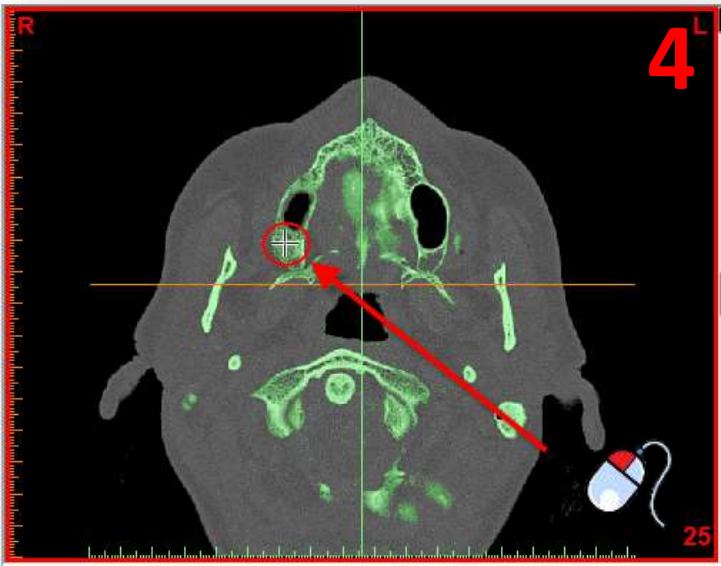


When following the Single Scan procedure, the patient wears a special scan prosthesis during the scan. The scan prosthesis is produced by a dental lab and is fabricated using a mixture of barium sulfate. Because of this special composition, the prosthesis is clearly visible in the CT images and can be segmented separately. In this section we will explain how you can perform such a segmentation.

The first thing we need to do is create a segmentation of the patient’s jaw using the ‘*Segmentation wizard*’. In the Task Panel under ‘2. Segment’ select ‘*Segmentation wizard*’ (1). Select ‘*Bone*’ as anatomic type (2) and click ‘*Next*’ to continue (3).




Click an internal bone point (4) and click ‘*Next*’ to continue (5).

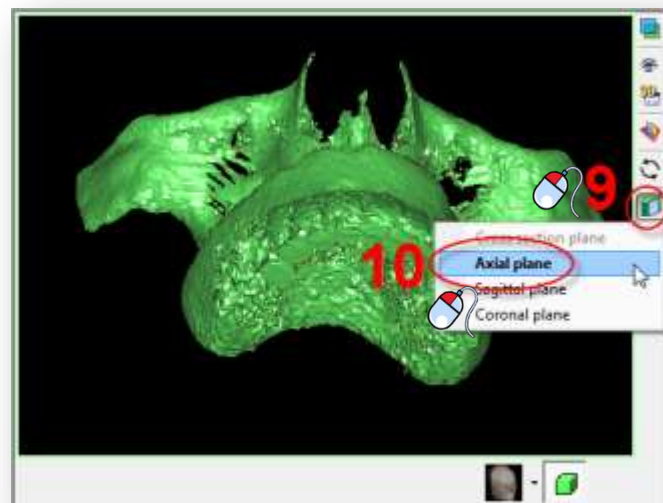
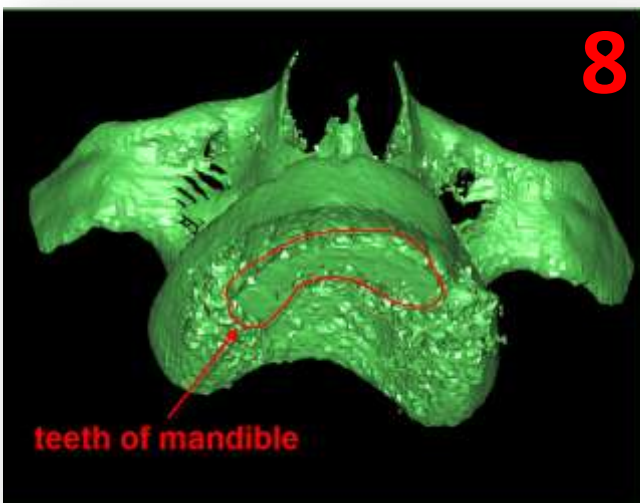




Now click and hold the left mouse button and drag a circle around the area of the bone model that you would like to remove (6). Release the mouse button to remove the part (7).

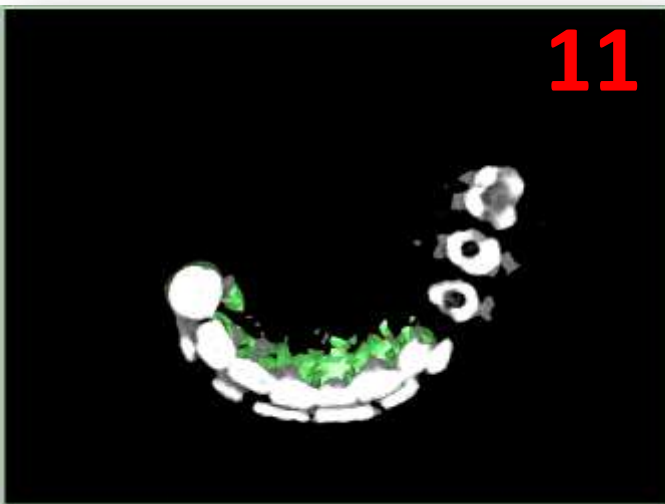


In the 3D model you can notice that part of the teeth of the mandible are attached to the scan prosthesis (8). We will remove these teeth using a clipped view. To enable clipping, click the clipping icon  (9). From the drop-down menu select 'Axial plane' (10).

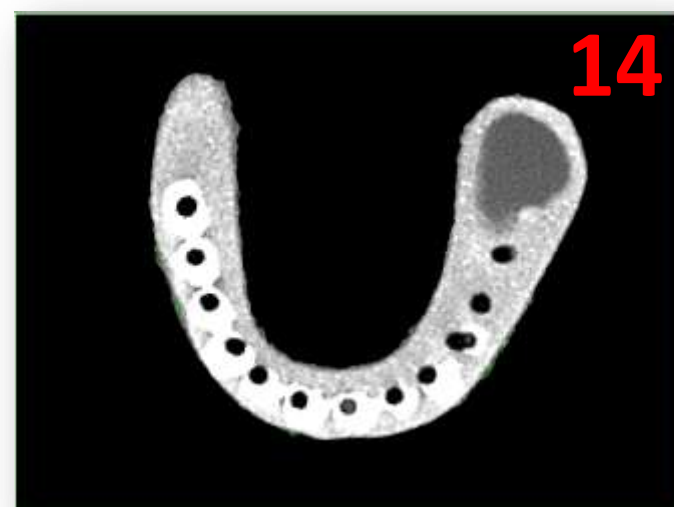
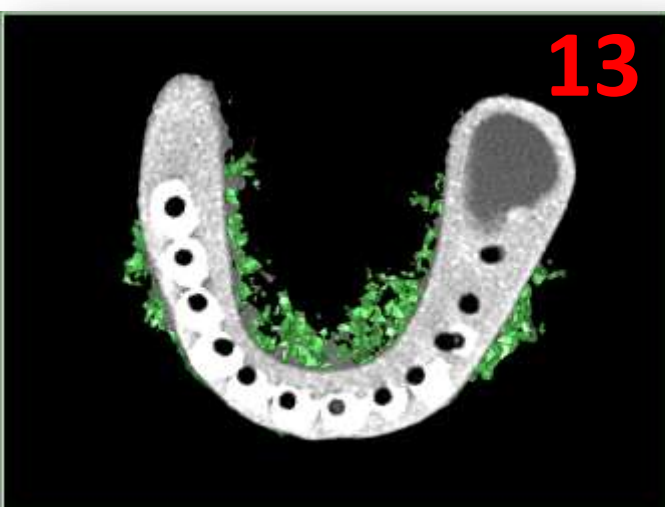




Scroll to the right slice using the mouse wheel button (**11**) and remove the bottom teeth from the prosthesis model (**12**).

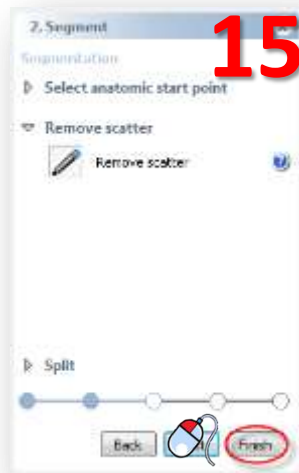


Scroll with the mouse wheel to navigate through the slices (**13**) and remove the remaining scatter around the prosthesis (**14**).

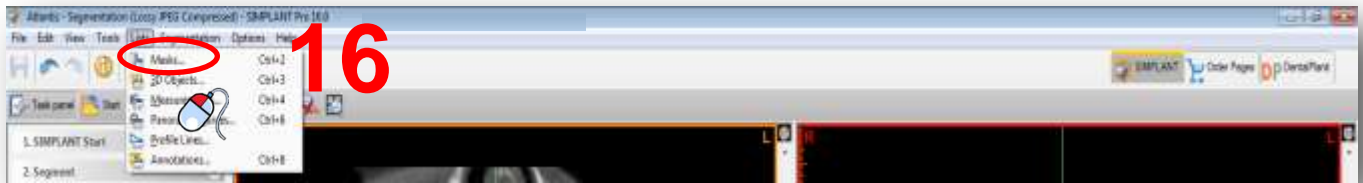




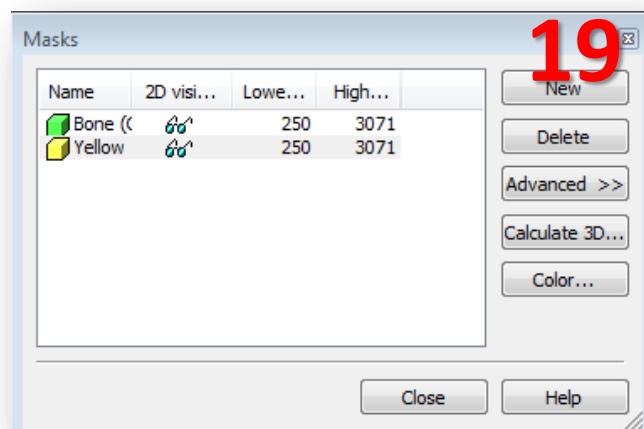
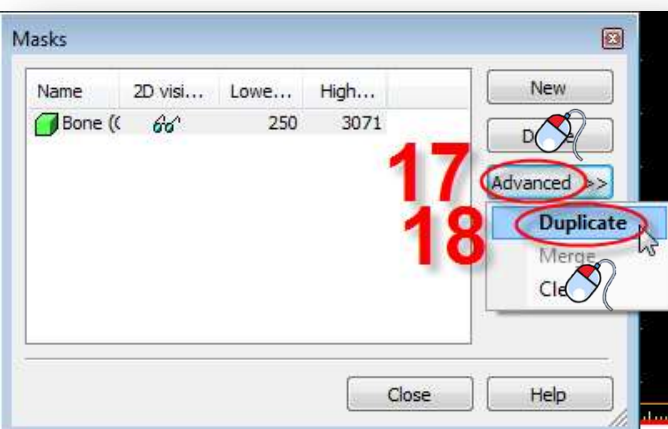
Click 'Finish' to exit the Segmentation Wizard (15).



Now we are going to create a duplicate of the mask that we just created. In the SIMPLANT menu, navigate to 'Lists>Masks' (16).

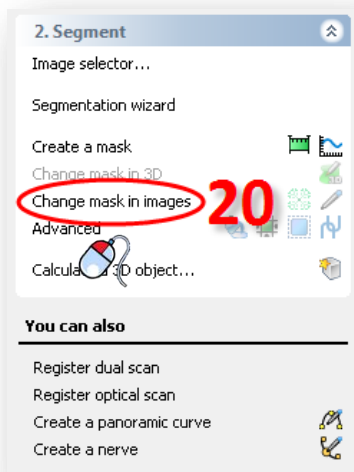



In the 'Masks' dialog click the 'Advanced' button (17) and from the drop-down menu select 'Duplicate' (18). A new copy of the green mask is created (19). This new (yellow) mask will become the mask for the bone model.

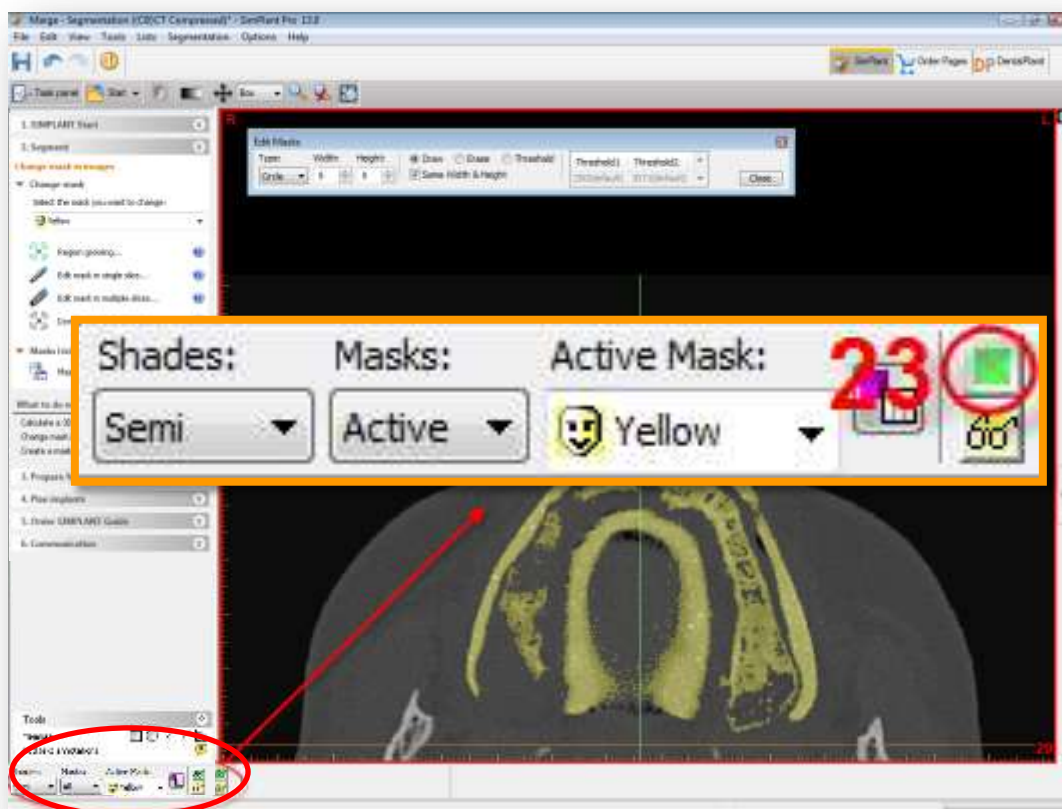




Now we will edit the yellow mask in the 2D images. We are going to remove the scan prosthesis from this mask to create a bone model mask. In the Task Panel under '2. Segment' select 'Change mask in images' (20). Afterwards, select the yellow mask as mask that you would like to change (21) and select 'Edit mask in single slice' (22).

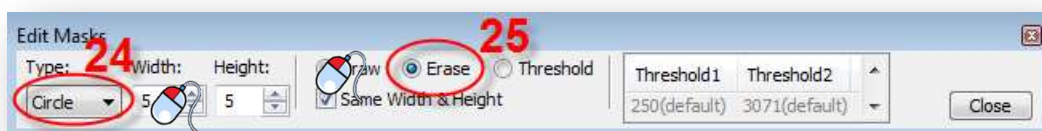


On the bottom left you of the window you can find the 'Masks' dialog. Click the  icon to make the green mask invisible (23).





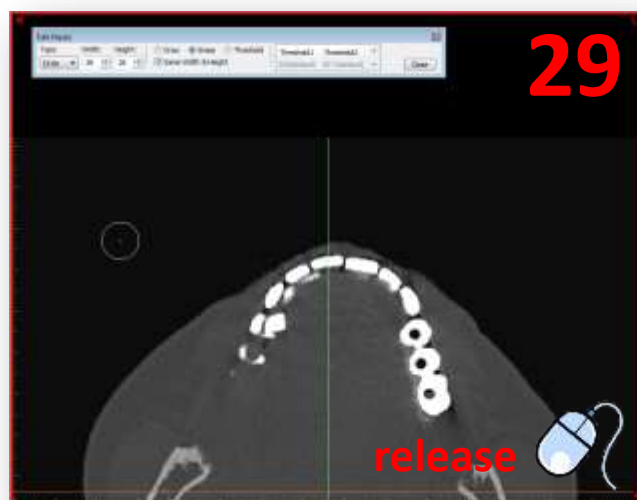
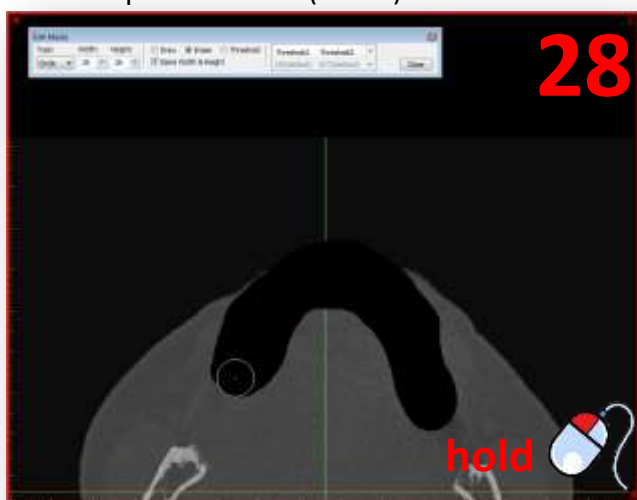
In the 'Edit Masks' dialog select 'Circle' as type (24) and select 'Erase' (25).



Now you can erase the redundant parts of the yellow mask slice per slice. Click and hold the left mouse button and trace the area of the mask that you wish to remove (26) (the traced area colors black). Release the mouse button to finish (27). Notice that the yellow mask has disappeared on the places that you have traced.

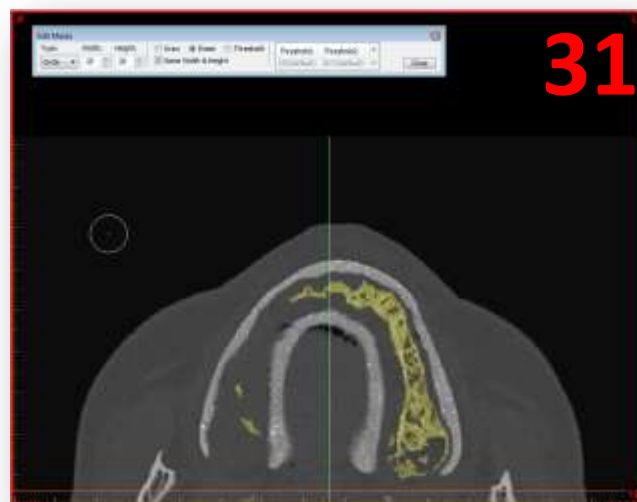
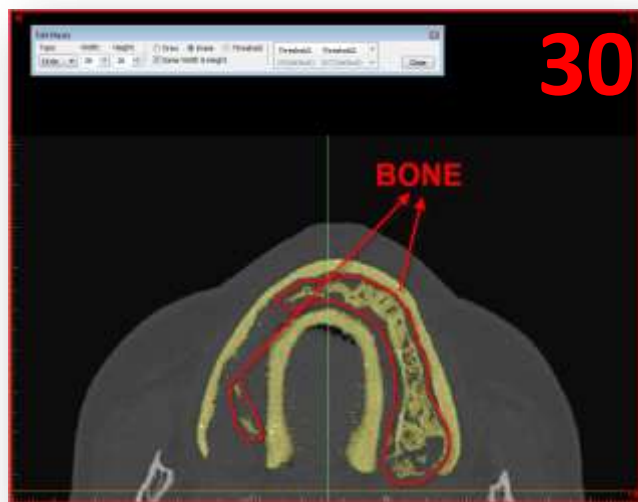


Now scroll to the next slice. Remove the redundant parts of the yellow mask here in the same way as you did in the previous slice (28-29).

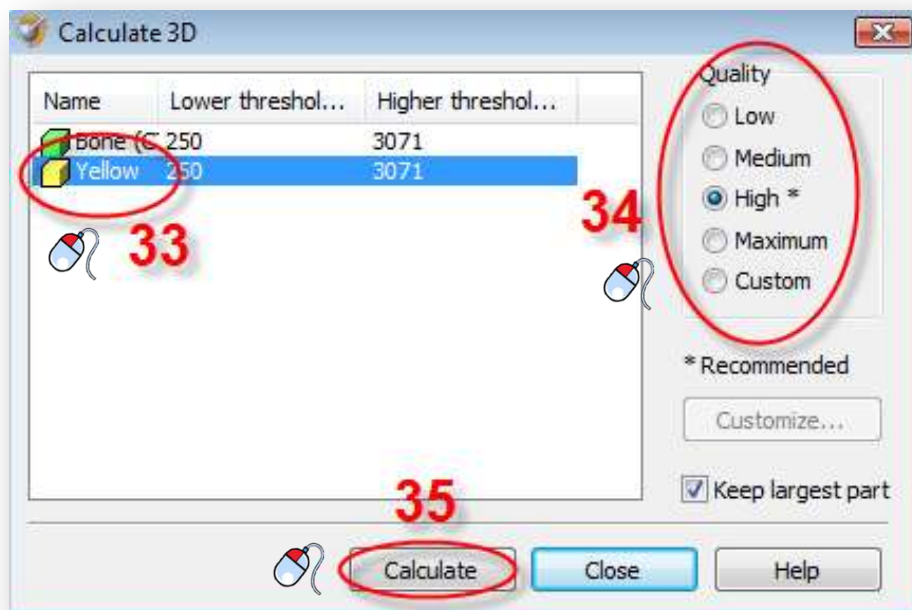
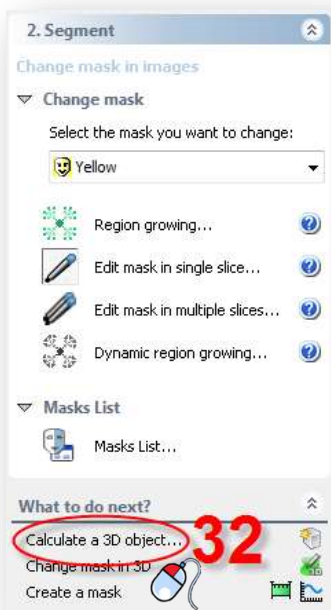




Repeat this for every slice in which you have to clean up the yellow mask. In the region of the scan prosthesis be sure not to erase the bone part of the mask. For example, in slice 19, you can see both bone and prosthesis material. You can easily distinguish the porous bone parts from the prosthesis parts in the slices visually (30). Only erase the prosthesis parts from the mask (31).



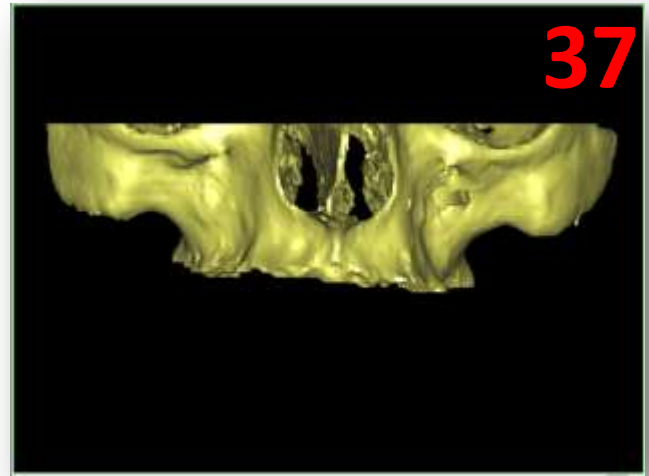
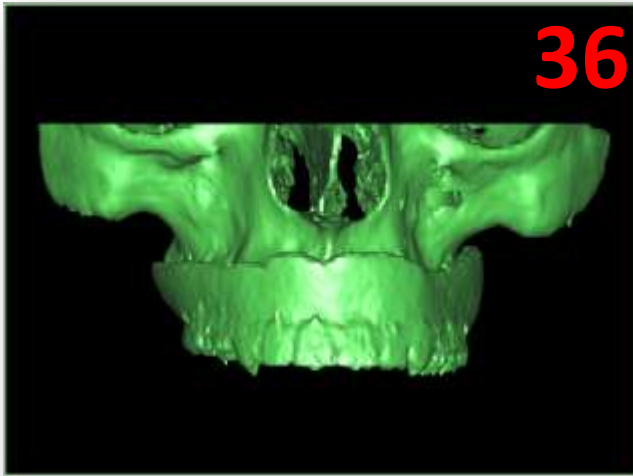
Now we need to calculate a 3D object again from the altered yellow mask. Select 'Calculate a 3D object' (32). In the 'Calculate 3D' dialog select the 'Yellow' mask (33), choose the quality of the 3D object (34) and click 'Calculate' (35) to finish.



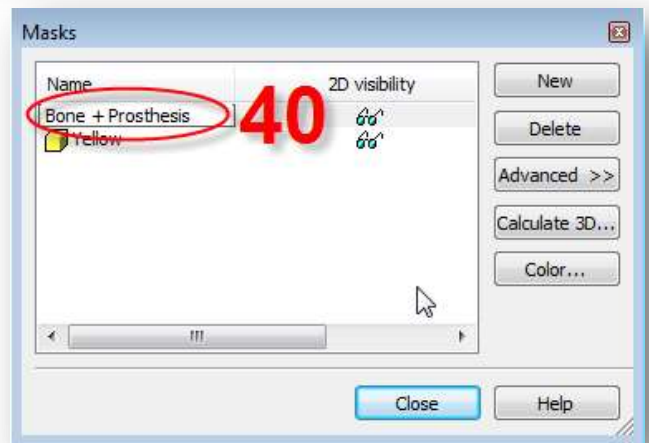
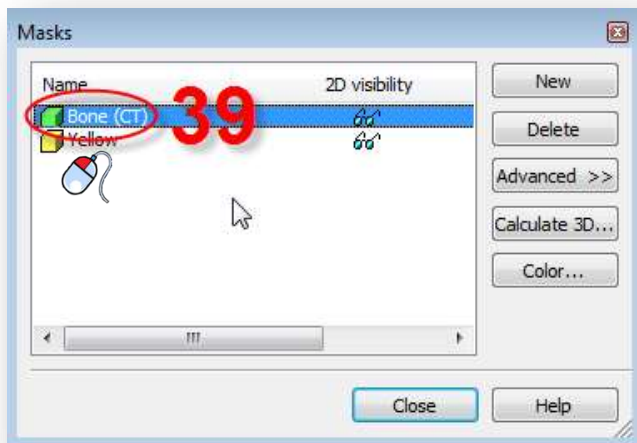
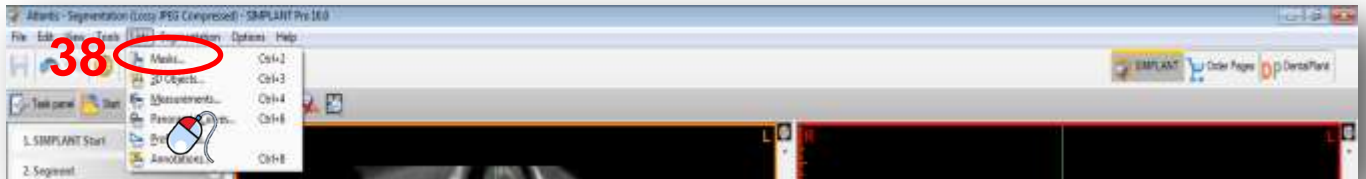


At this point we have created two masks:

- One mask consisting of the bone and the prosthesis (the green mask) (36)
- Another mask consisting of the bone (the yellow mask) (37)

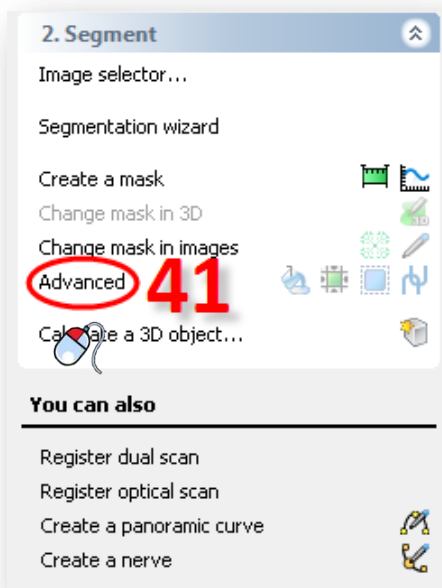


Now we will rename these two masks. In the SIMPLANT menu select 'Lists>Masks' (38). In the 'Masks' dialog click the name of the mask with the left mouse button (39). Type the new name for the mask ("*Bone + Prosthesis*" for the green mask and "*Bone*" for the yellow mask) (40).





Now we will create a third mask by subtracting the yellow mask from the green mask using 'Boolean Operations'. This third mask will consist of the prosthesis. In the Task Panel under '2. Segment', select 'Advanced' (41). Afterwards, select 'Boolean operations' (42).

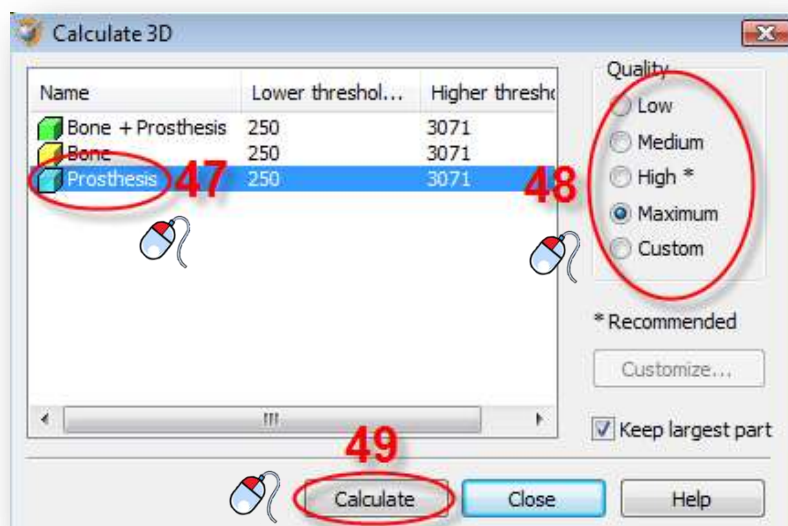
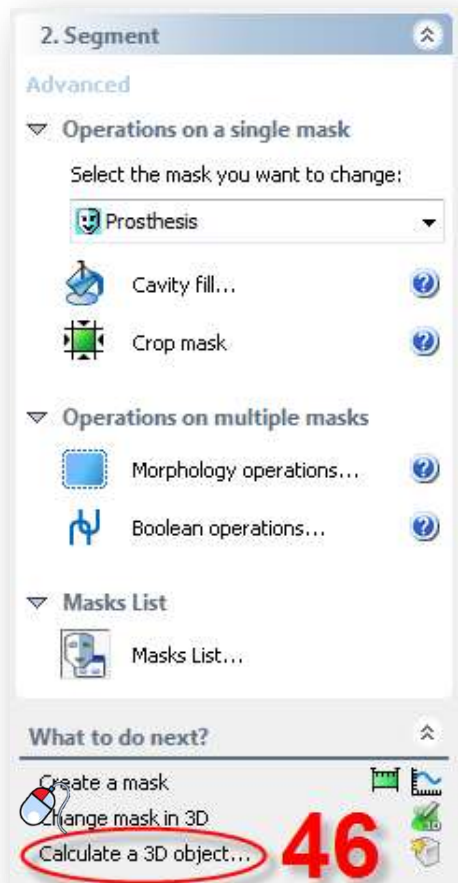


The 'Boolean Operations' dialog appears. Select the green "Bone + Prosthesis" mask as 'mask A' (43) and the yellow "Bone" mask as 'mask B' (44) and click 'Apply' (45). This creates a new (blue) mask that represents the separate prosthesis. Rename this mask to "Prosthesis" in the same way that you did for the other masks (38-40).

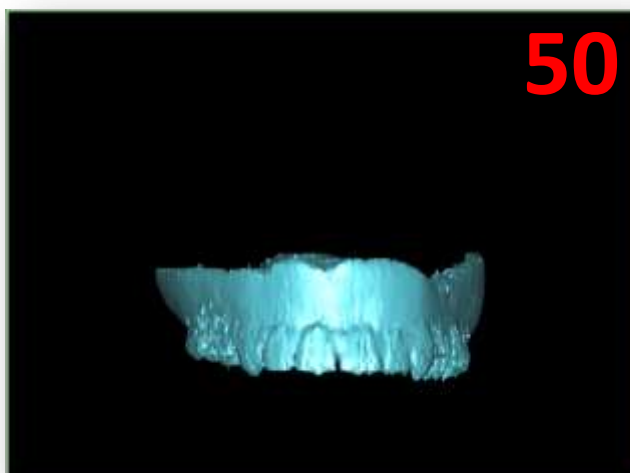




The next thing we have to do is create a 3D model from this mask. In the Task Panel, select '*Calculate a 3D object*' (46). In the '*Calculate 3D*' dialog, select the blue '*Prosthesis*' mask (47), select the quality of the 3D model (48) and click '*Calculate*' (49).

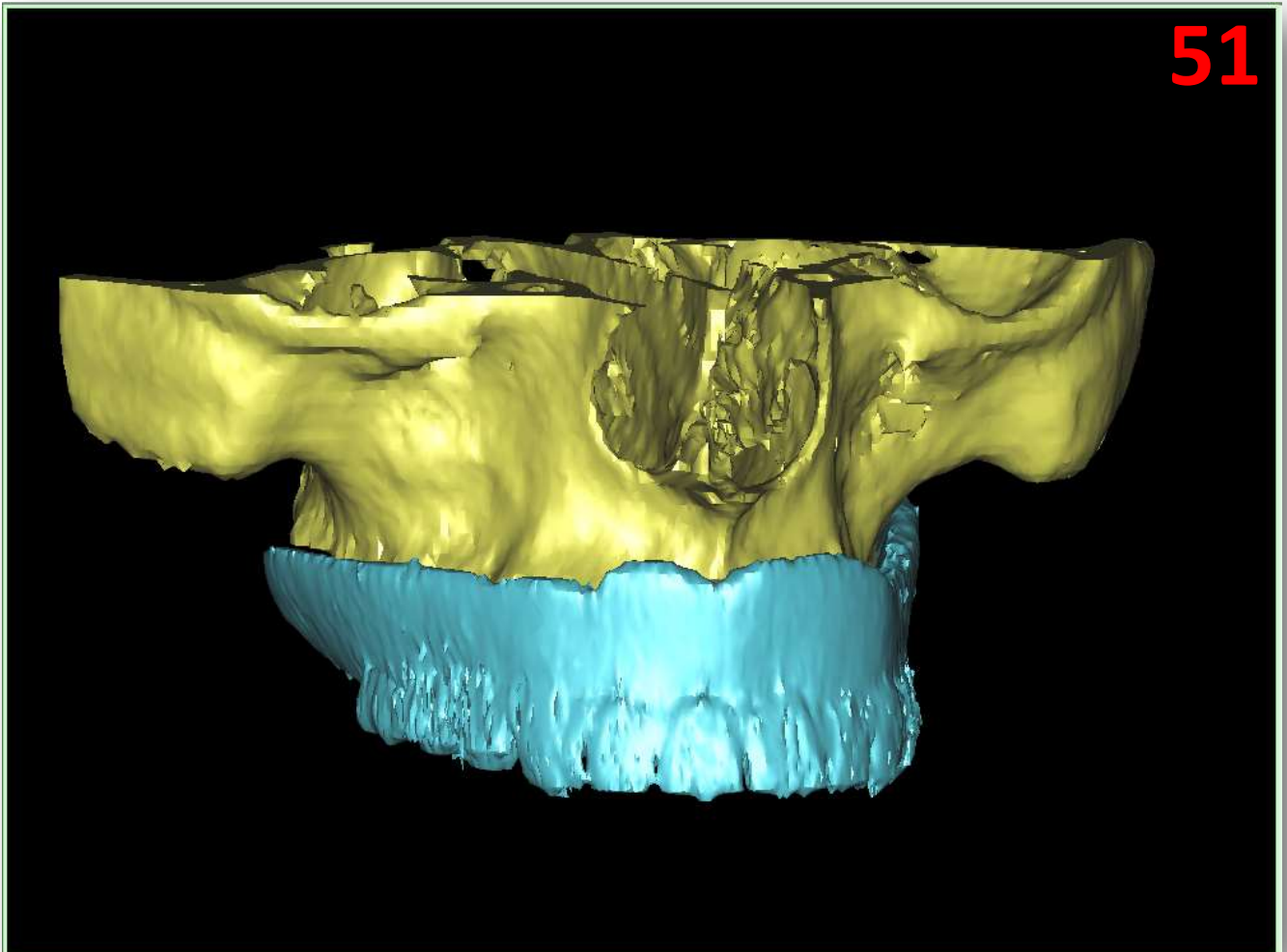


The result is a separate 3D model of the scan prosthesis (50).

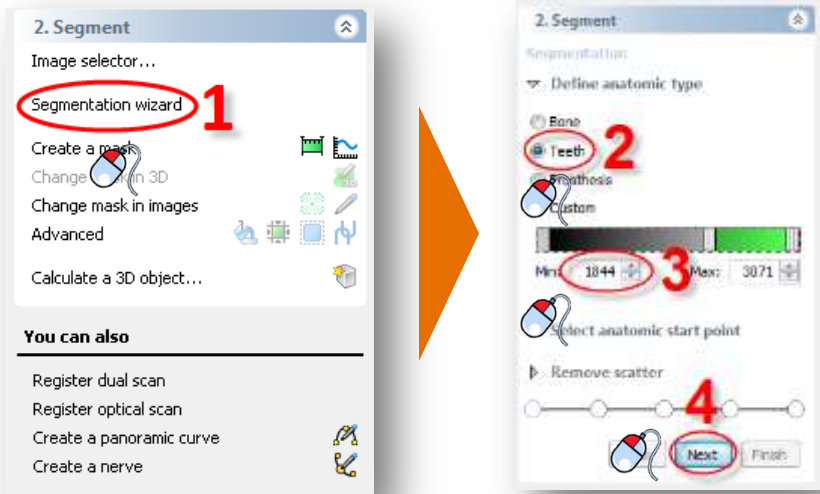




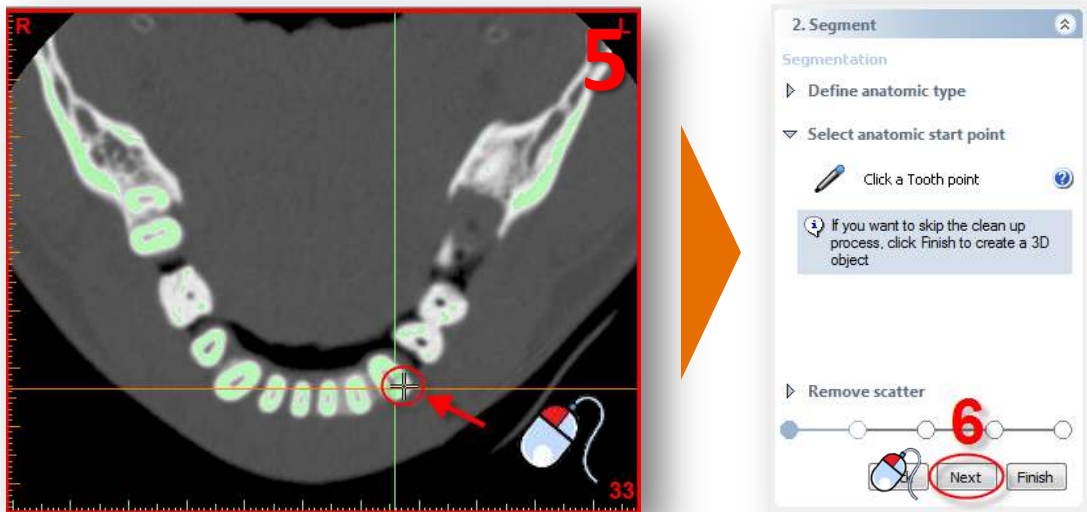
The final result is a separate segmentation of both the bone model and the prosthesis model (51).



In this section we will explain how you can perform a separate segmentation of the teeth. In the Task Panel under '2. Segment', select 'Segmentation wizard' (1). Select 'Teeth' as anatomic type (2). Set the minimum threshold value to around "1800" (3) and click 'Next' to continue (4).

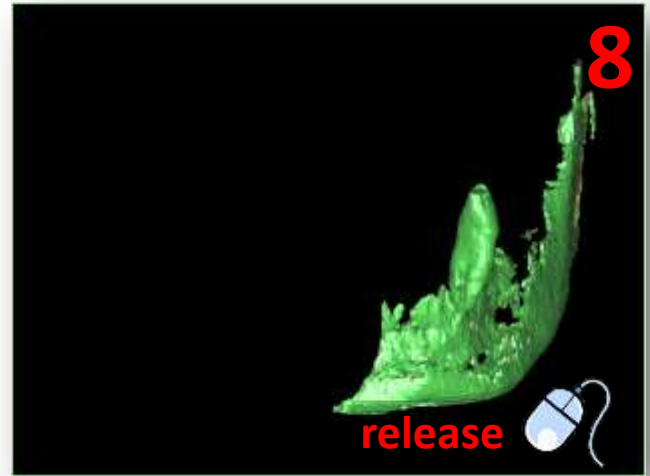
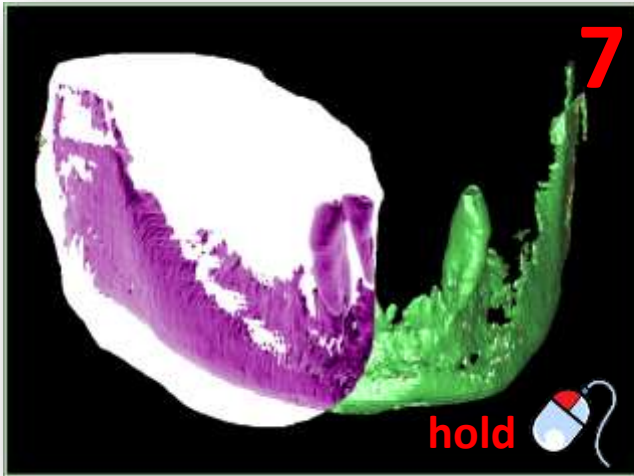


Click with the left mouse button somewhere inside the tooth surface (5). Click 'Next' to continue (6).

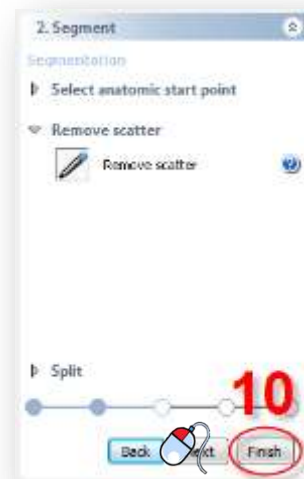




Click and hold the left mouse button and drag a circle around the area that you want to remove from the model (7). Release the mouse button to finish (8).

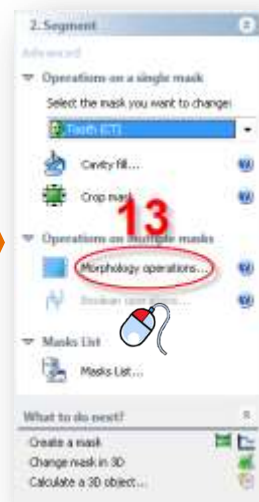
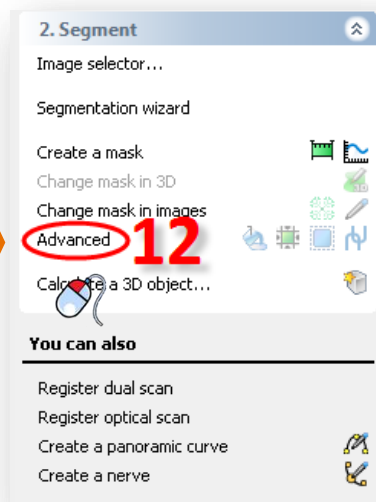
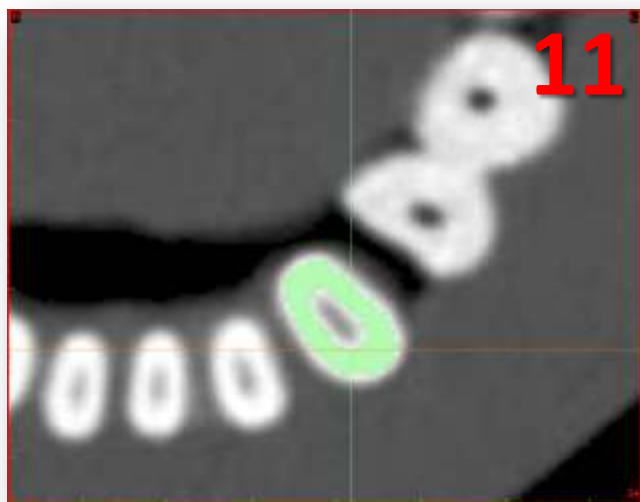


Use the method described above to remove the rest of the bone material. Now only the tooth remains (9). Click 'Finish' to end the Segmentation Wizard (10).

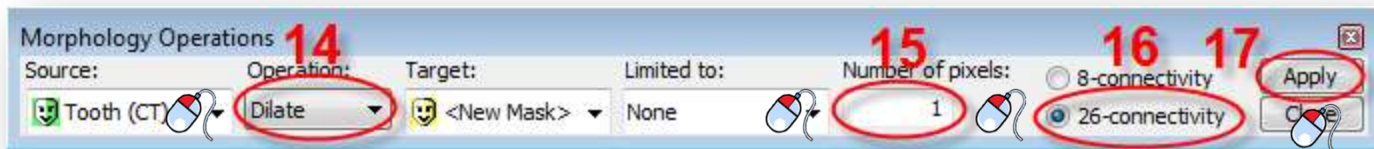




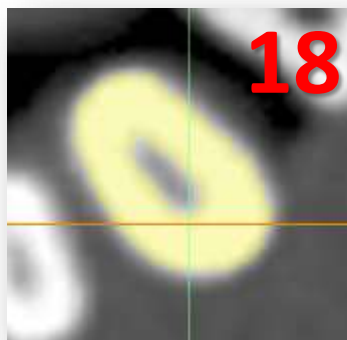
The segmentation is not yet perfect however. When you take a closer look at the green mask in the axial slices you can see that the edge mask doesn't correspond to the (white) edge of the teeth (11). In the next steps we will 'dilate' the mask to fix this. In the Task Panel under '2. Segment' select 'Advanced' (12). Afterwards, select 'Morphology operations' (13).



In the 'Morphology operations' dialog, select 'Dilate' (14). Set the 'Number of pixels' to "1" (15). Select '26-connectivity' (16) and click 'Apply' to finish (17).

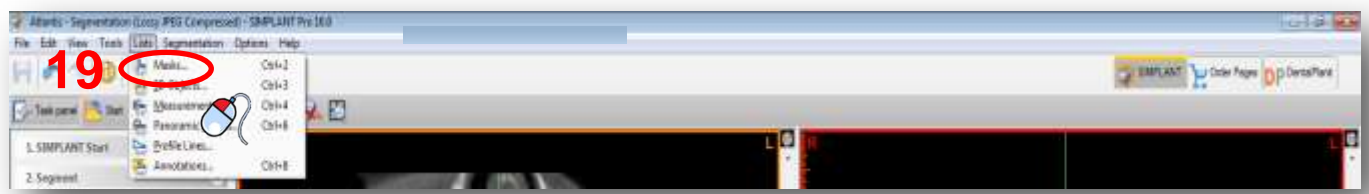


Notice that the newly created yellow mask corresponds with the tooth edge (18)

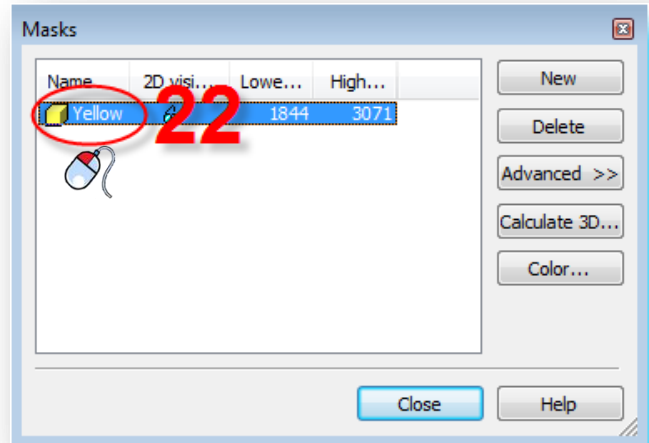
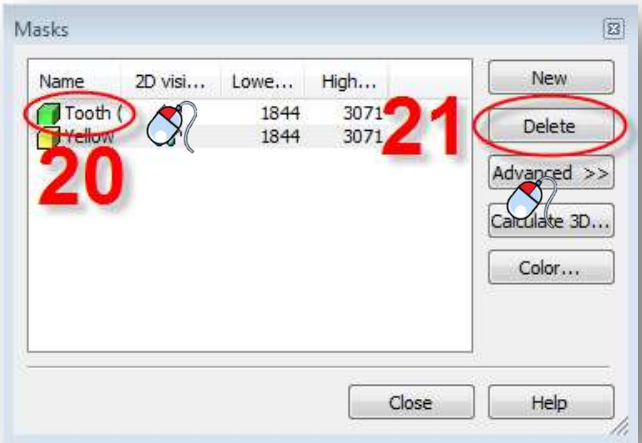




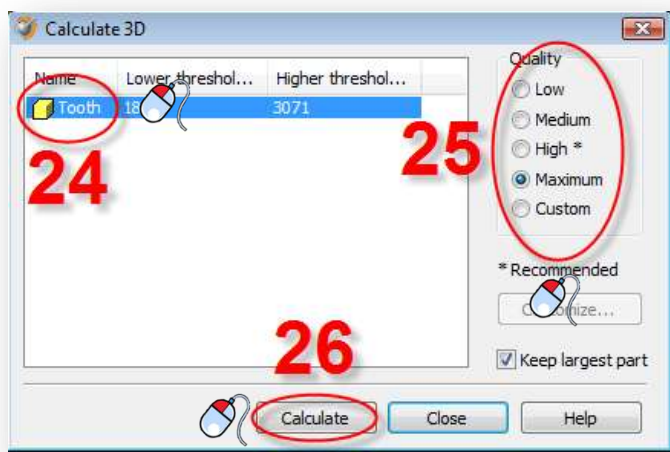
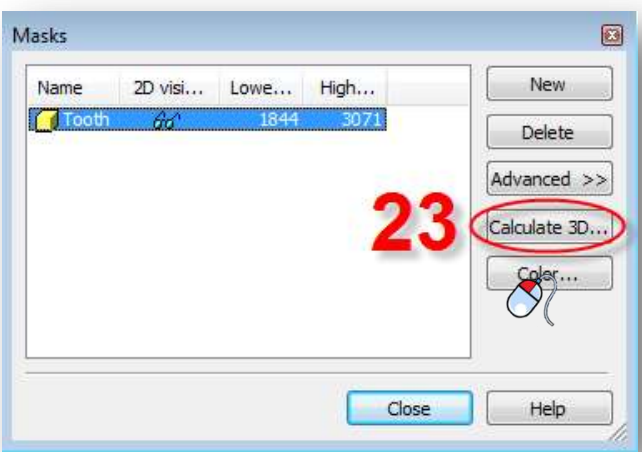
In the SIMPLANT menu navigate to 'Lists>Masks' (19).



In the 'Masks' dialog left-click the green 'Tooth' mask (20) and click the 'Delete' button to remove it (21). Afterwards, left-click the yellow mask and type "Tooth" to rename this mask (22).



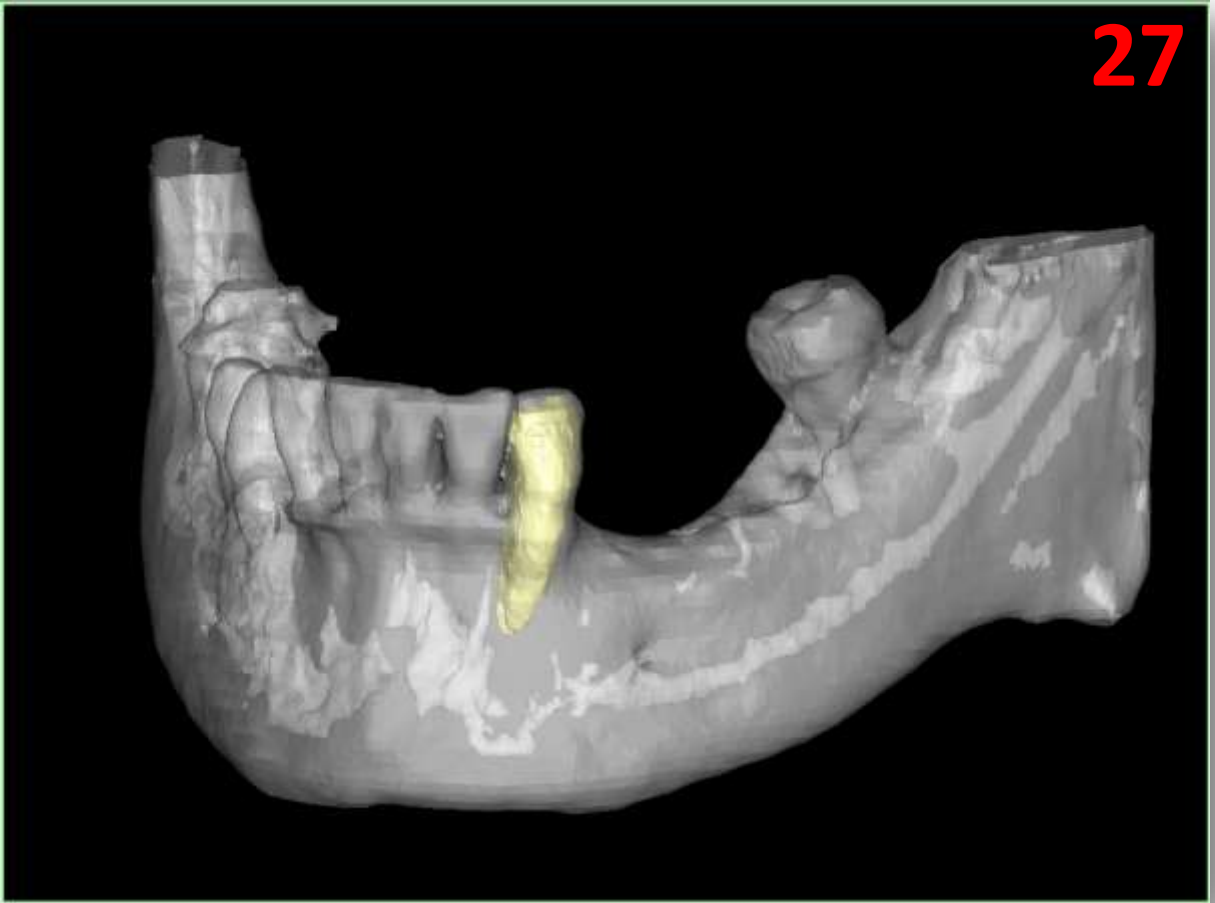
Click the 'Calculate 3D' button (23). In the 'Calculate 3D' dialog select the yellow 'Tooth' mask (24), select the quality of the 3D model (25) and click 'Calculate' (26).





We now have completed the separate segmentation of a tooth (27).

27



3. Prepare for planning



After opening the project, it can be prepared for the actual planning:

- A** Dual scan wizard
- B** Optical scan wizard
- C** Draw the panoramic curve
- D** Draw the nerve
- E** Create Virtual Teeth
- F** Create bone graft
- G** Make measurements



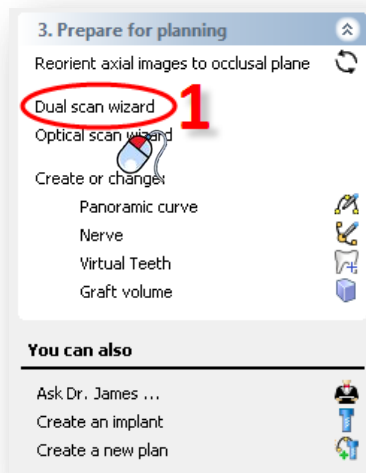
SIMPLANT® Pro



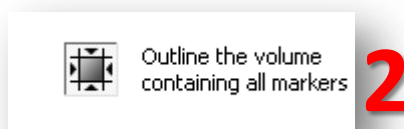
To be able to use the Dual Scan wizard you need two scans:

- (A) a scan of the patient with the scan prosthesis
- (B) a separate scan of the scan prosthesis

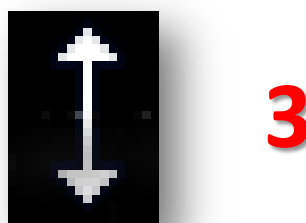
In the Task Panel under 'Prepare for planning' select 'Dual Scan wizard' (3).



In the next step, SIMPLANT is going to search for the Dual Scan Markers on the scan prosthesis in the patient scan (A). The Markers are obviously only located in the area of the scan prosthesis. To prevent SIMPLANT to search for Markers in the entire 3D model, you need to outline the volume that contains all the Markers (2). This outlining can be done in the three 2D view windows.

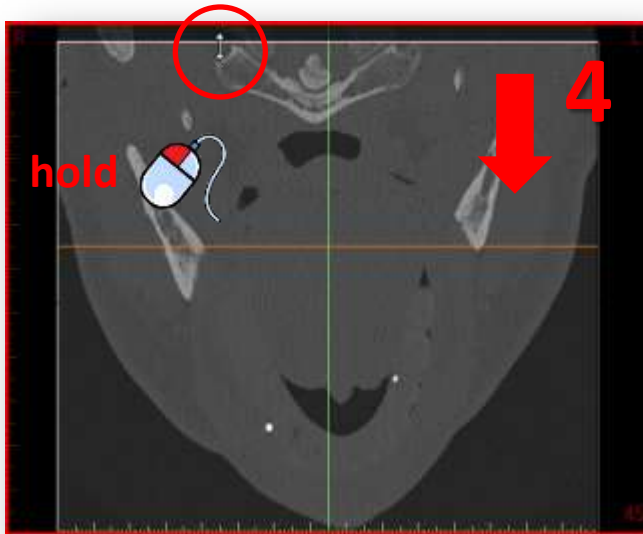


In the 2D view windows you can now see a square that indicates the area that SIMPLANT will search for Markers in. To change this area, move your mouse cursor over one of the edges of such a square until the mouse cursor changes into following icon (3):

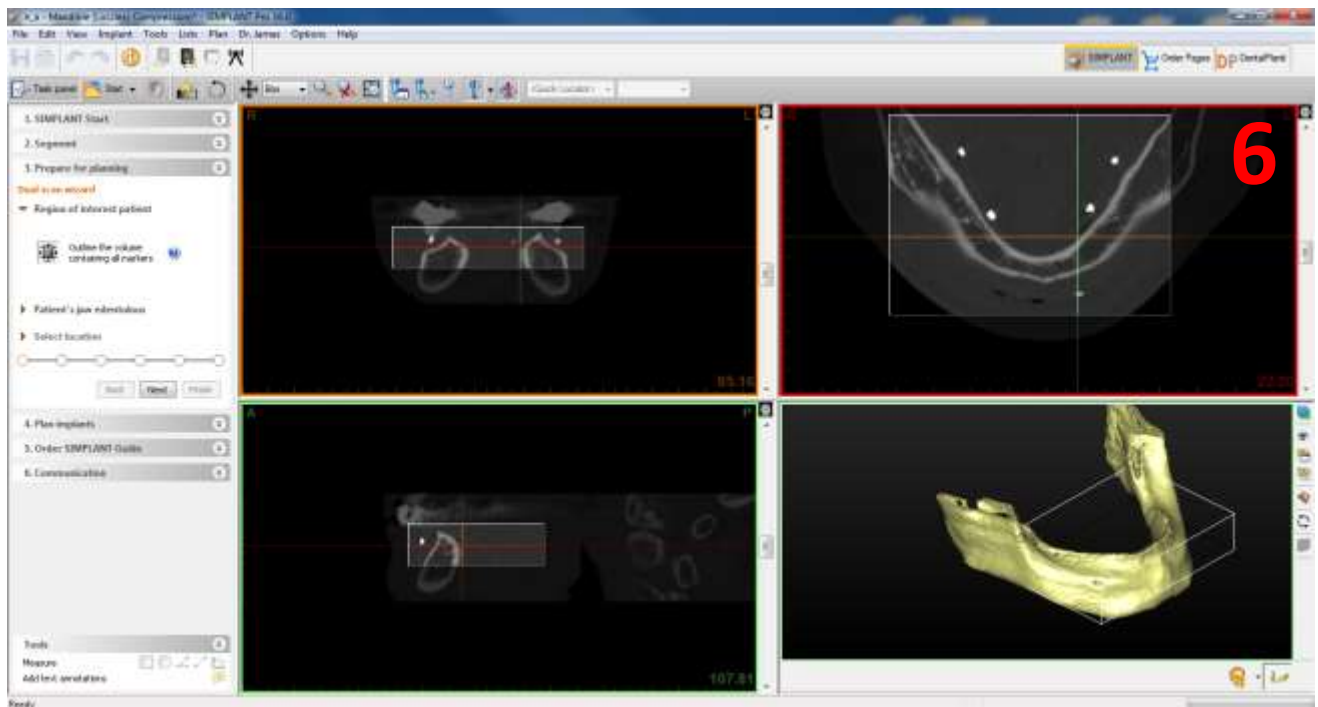




Now click and hold the left mouse button and move the mouse cursor to change the dimensions of the square (4). Release the mouse button to finish the operation (5). Repeat this for all the sides of the square until the selected area is narrowed down to the area containing the Markers.

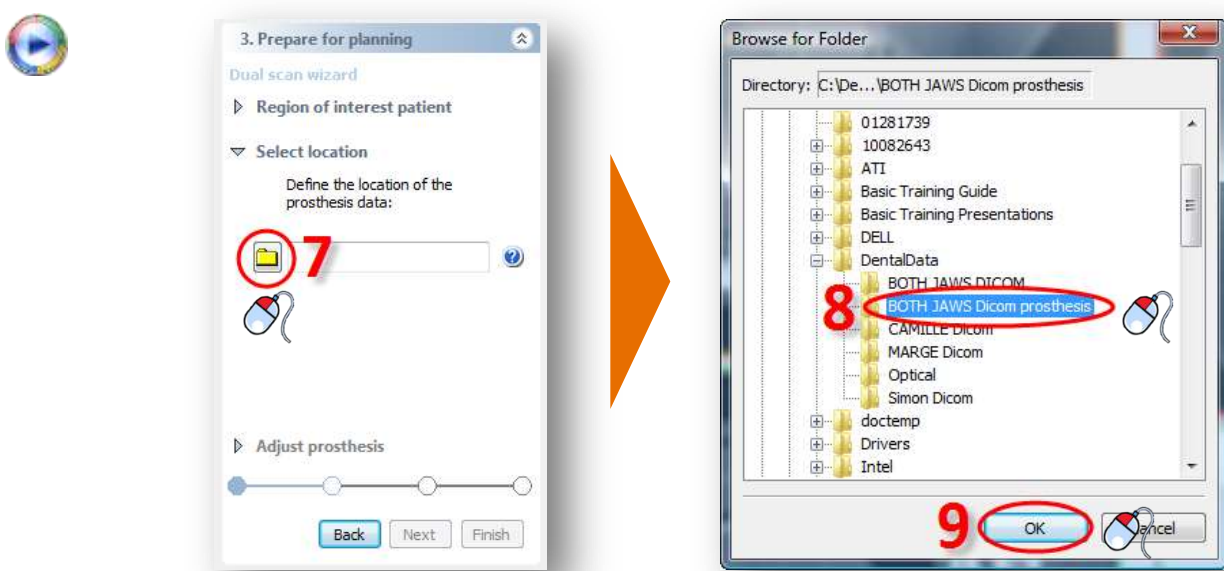


The selected area should look like the area selected in the window shown below (6). Only the area of the scan prosthesis is selected. Make sure all markers are in the box area.





Define the location of the prosthesis data (7). Browse for the folder where your CT images are stored (8). Click 'OK' to continue (9).

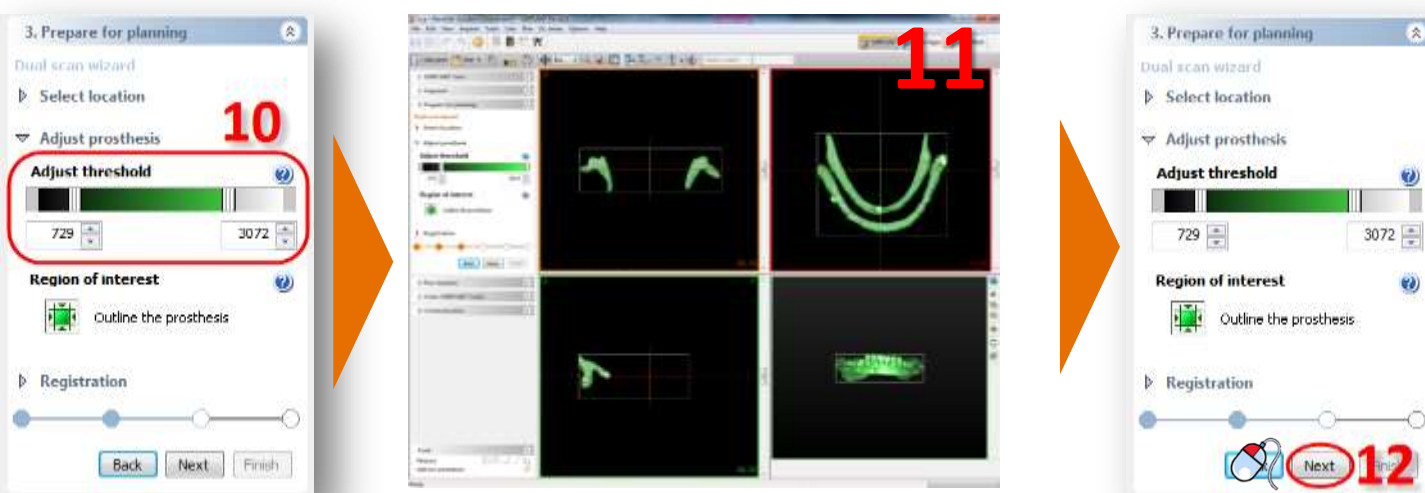


Adjust the threshold of the prosthesis if necessary (10).

[NOTE: only adjust the threshold if necessary! If protocol was followed, the threshold will not have to be adjusted]

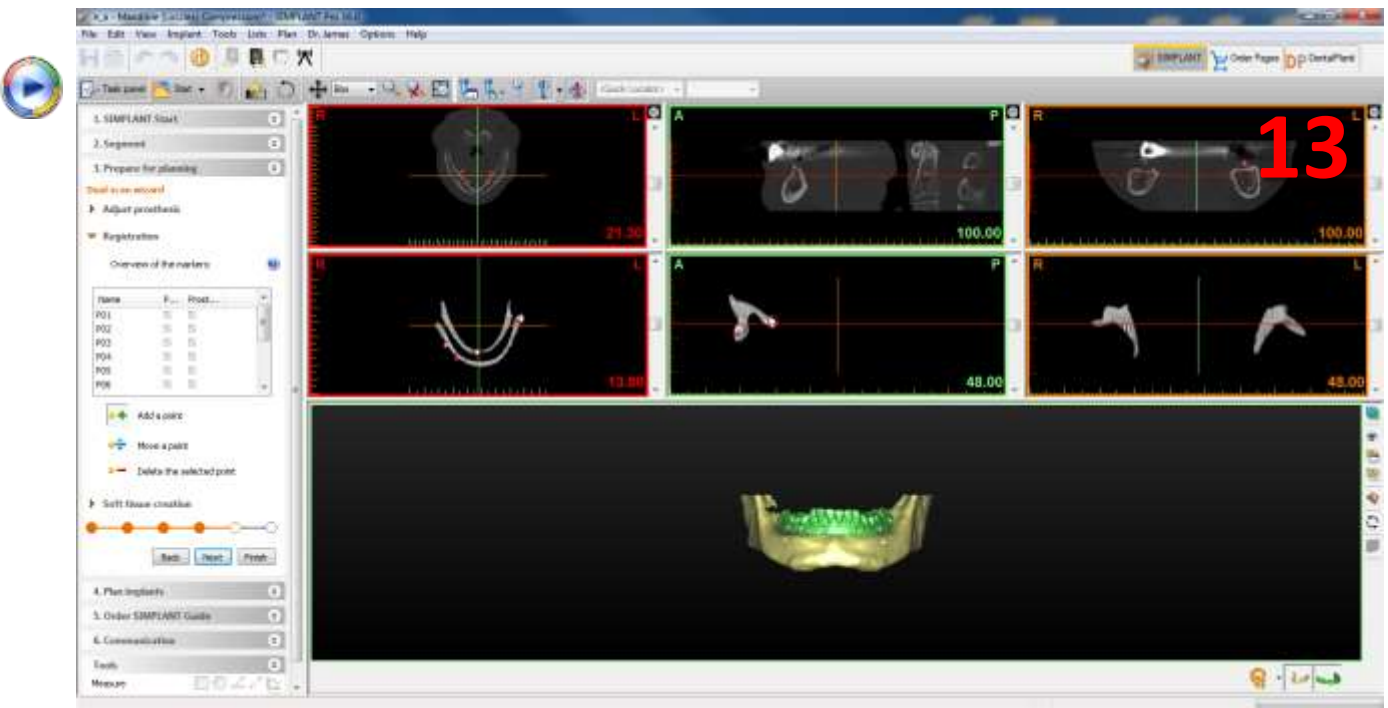


Outline the volume of the prosthesis in the same way you did in step 4 and 5 (11). Click 'Next' to continue (12).

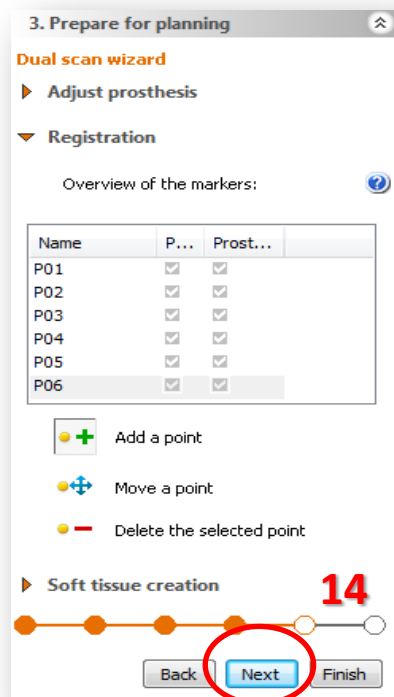




SIMPLANT now matches the 3D model of the prosthesis on the 3D model of the patient automatically (13).

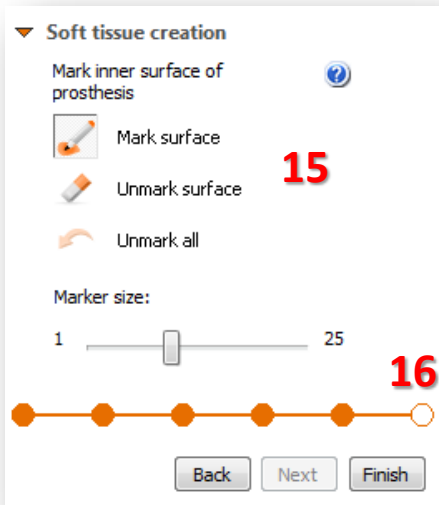


Click 'Next' to continue to the last step: Soft tissue creation (14).



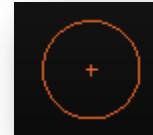


You can mark the inner surface of the prosthesis and create a 3D object of the soft tissue surface.

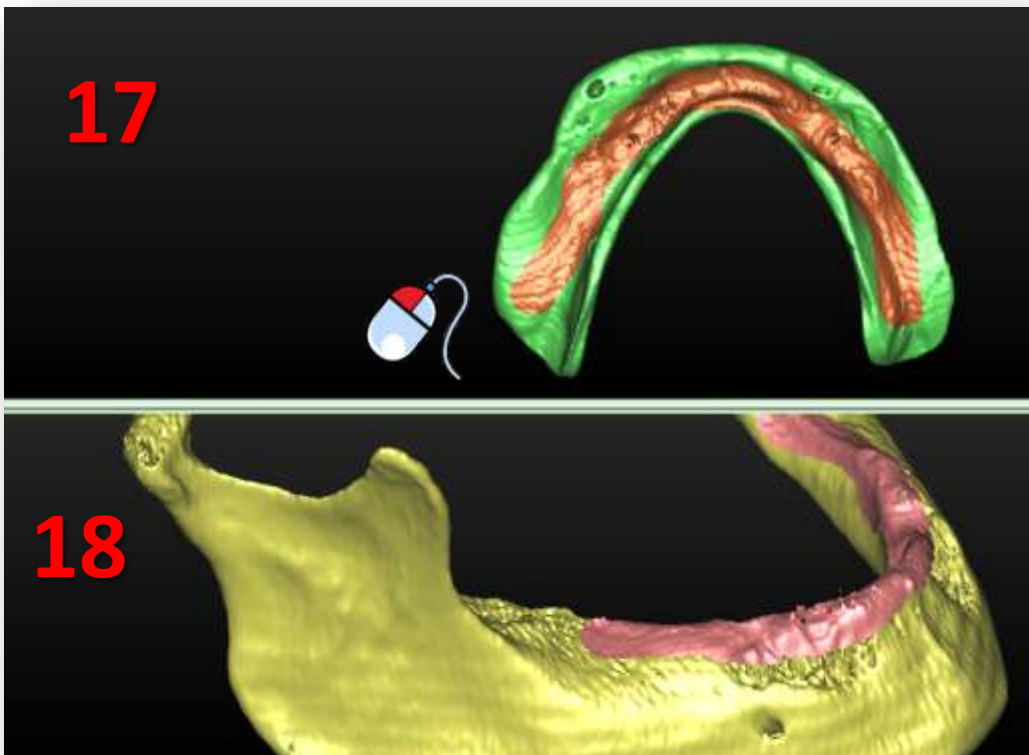


Choose if you want to mark or unmark the surface (15)

Choose the marker size (16)

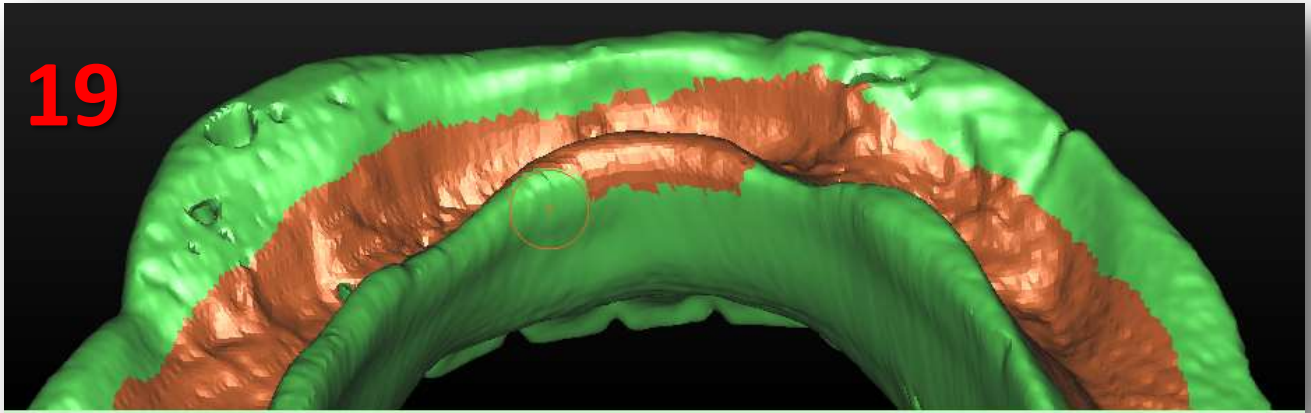


Hold the left mouse button and mark the soft tissue surface (17). When you release the mouse button the 3D object of the soft tissue is created in the 3D view (18).

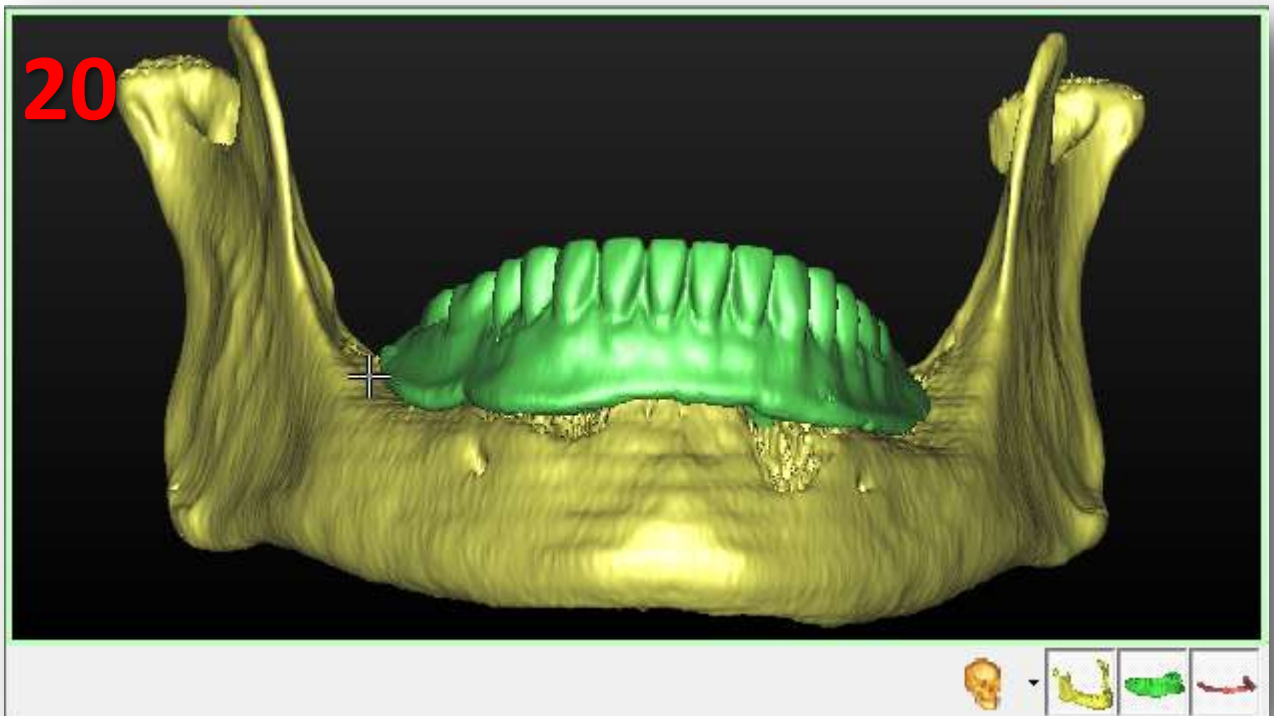




Now you can finetune the soft tissue 3D object by rotating the prosthesis and marking or unmarking. In (19) we unmark a piece of the prosthesis that was incorrectly marked.



When you are ready, click 'Finish'. The result is a 3D object of the prosthesis and a 3D object of the soft tissue.(20).



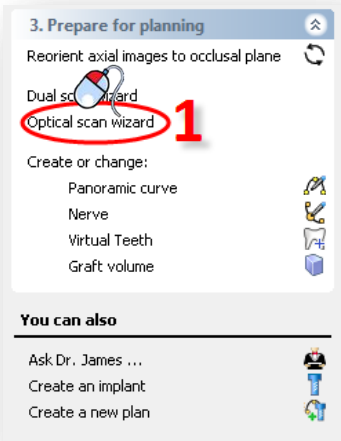


To be able to use the Optical Scan wizard you need two scans:

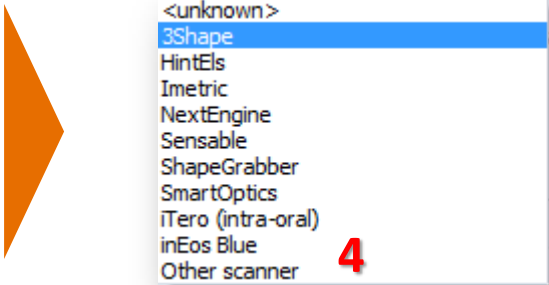
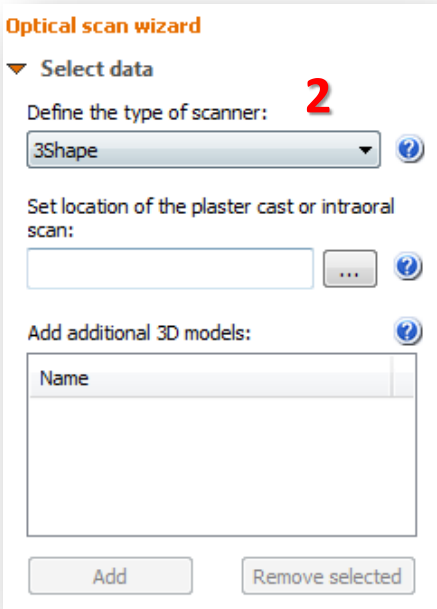
- (A) a scan of the patient with the scan prosthesis
- (B) an optical scan of the plaster cast or an intraoral scan

If available, you can add a wax-up and an antagonist (or any other additional 3D files from a 3rd party software).

In the Task Panel under ‘Prepare for planning’ select ‘Optical scan wizard’ (1).

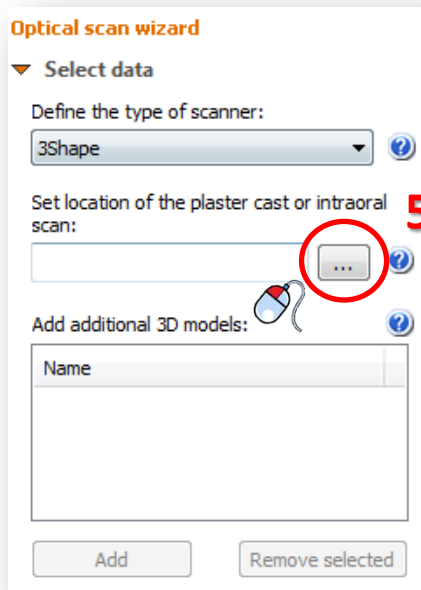


First you need to define the scanner type (2). Select which scanner was used to scan the plaster cast from the list (3). If your scanner is not listed choose “Other Scanner” (4).

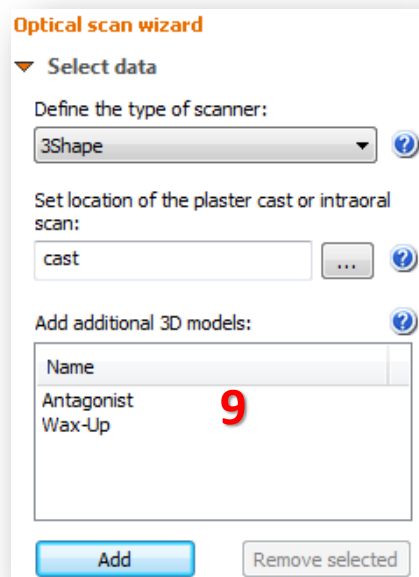
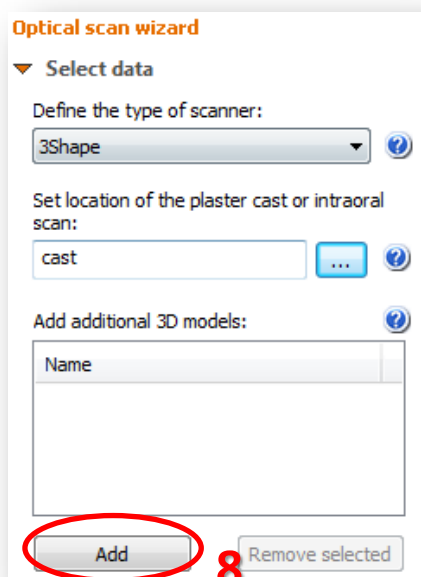




Now you need to locate the plaster cast or intraoral scan data (5). In the 'Open' dialog browse for the file (6) and click 'Open' to continue (7).

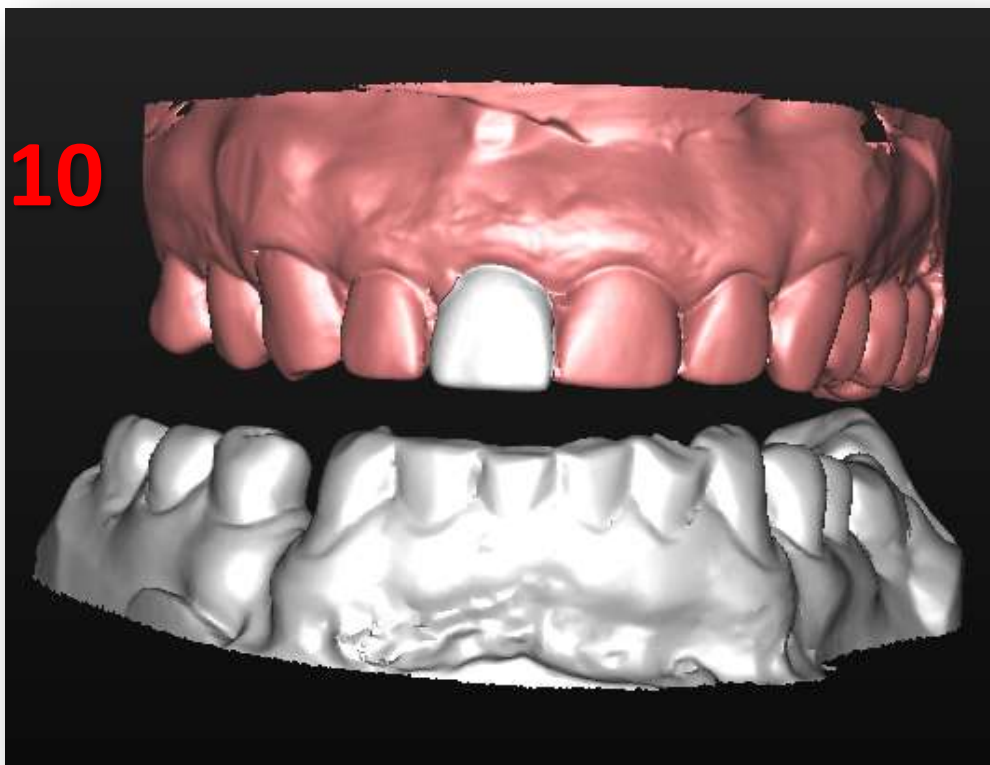


It is now also possible to add additional 3D models like a wax-up or an antagonist. Click 'Add' to select additional files (8). The files will be added in the correct position to your project (9).





All files have now been imported. This is how they look like before the matching with the CT images (10).



Click 'Next' in the wizard to go to the Registration step (11).

Optical scan wizard

▼ Select data

Define the type of scanner:
3Shape

Set location of the plaster cast or intraoral scan:
cast

Add additional 3D models:

Name
Antagonist
Wax-Up

Add Remove selected

► Registration

► Manually adjust Registration

11

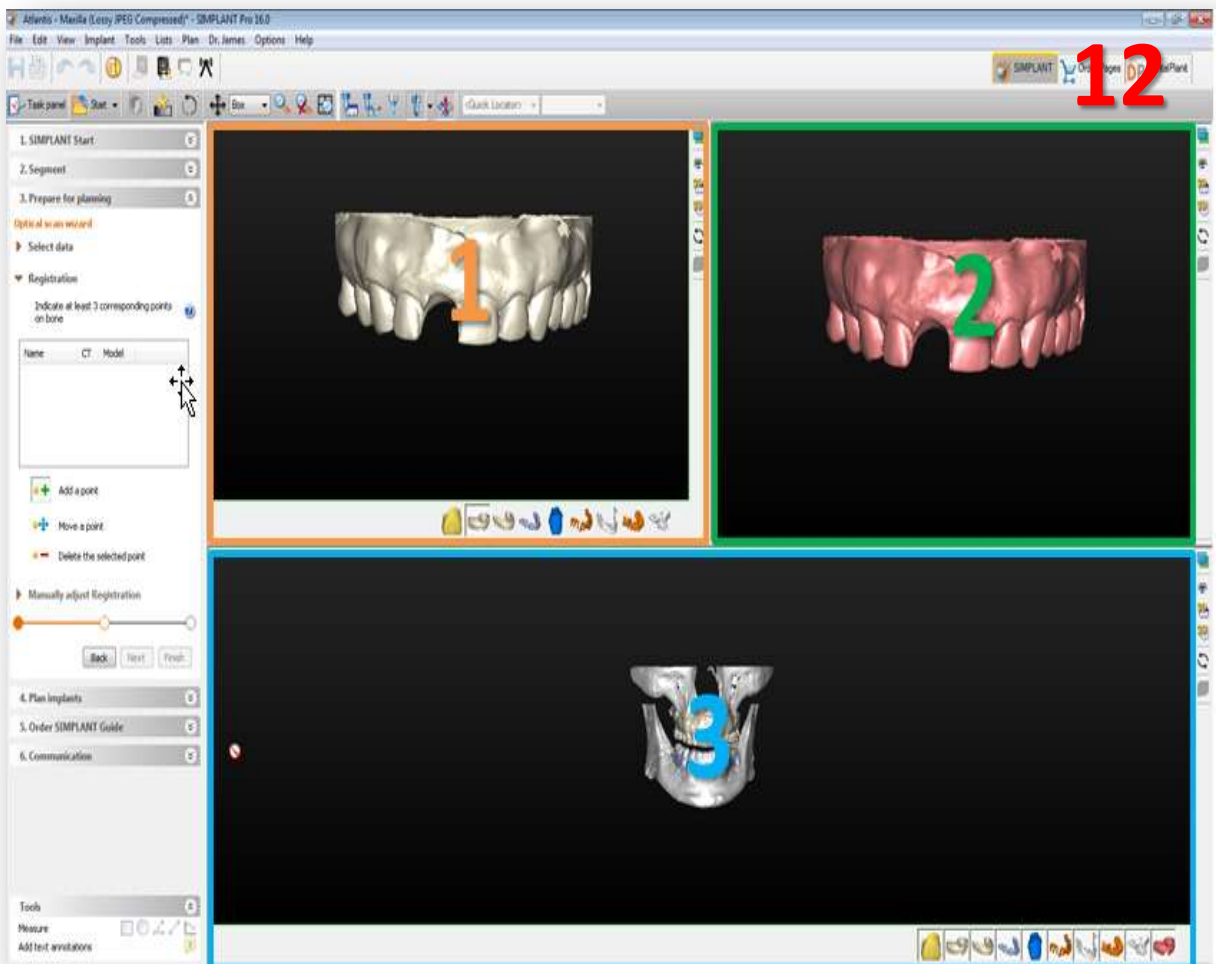
Next Finish



In the following step, three 3D view windows are shown (12):

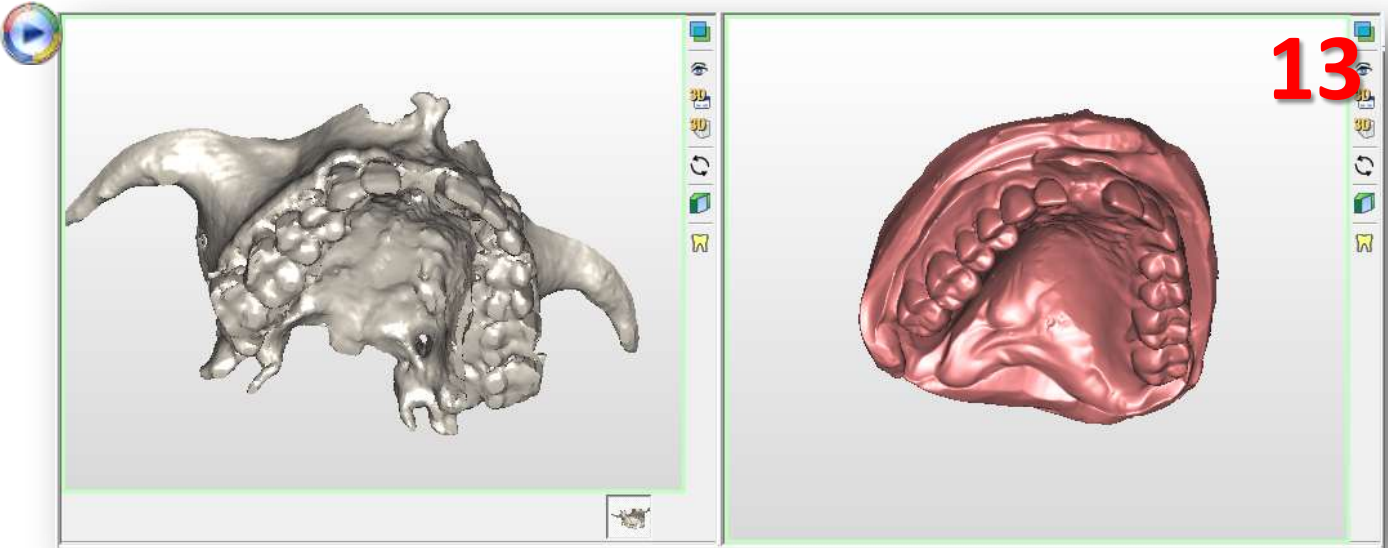
- (1) The 3D view of the patient's jaw
- (2) The 3D view of the plaster cast model
- (3) The combined 3D view of the patient's jaw and the plaster cast model

As you can see in the image below, the position of the plaster cast model does not yet match the position of the patient's jaw. In the next step we will match these two positions.

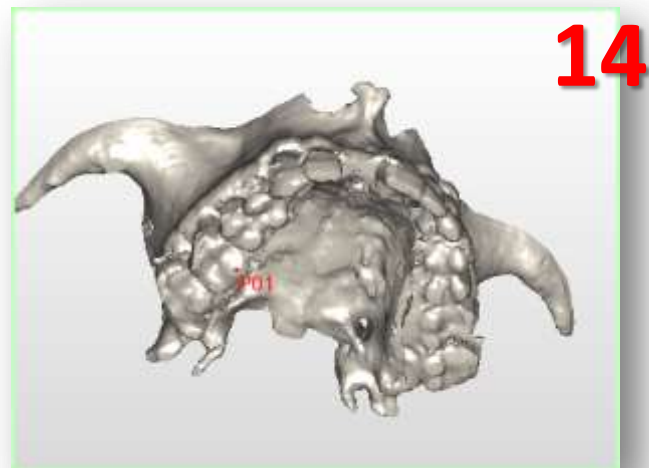
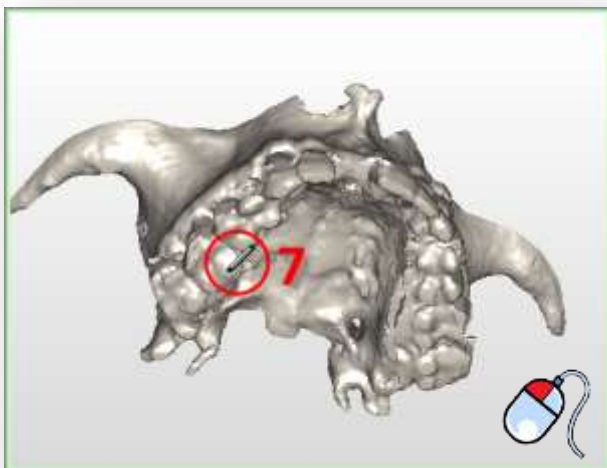




The matching of the two 3D models is done based on the information of the tooth tips. SIMPLANT recognizes the similar geometry of these tooth tips in both 3D models and matches the models based on this information. However, SIMPLANT can not perform this operation fully automatic. The user still needs to select the corresponding tooth tips in both 3D models (a minimum of three tooth tips preferably on dispersed locations in the mouth). To be able to select the corresponding tooth tips you first need to rotate the separate 3D models (views (1) and (2)) in order to view them both from a similar perspective (13).

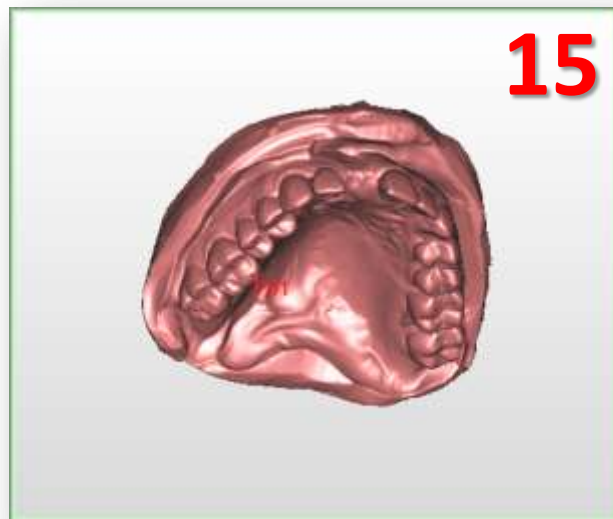
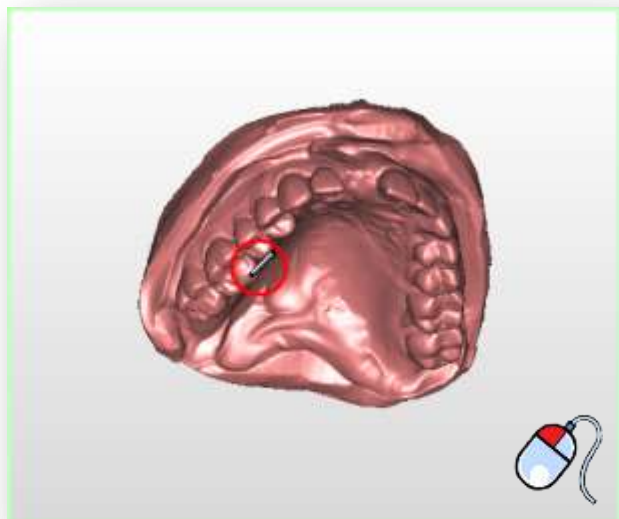


First click a tooth tip point with the left mouse button in the 3D view of the patient's jaw (view (1)) (7). The point that you selected is now marked as 'PO1' (14).

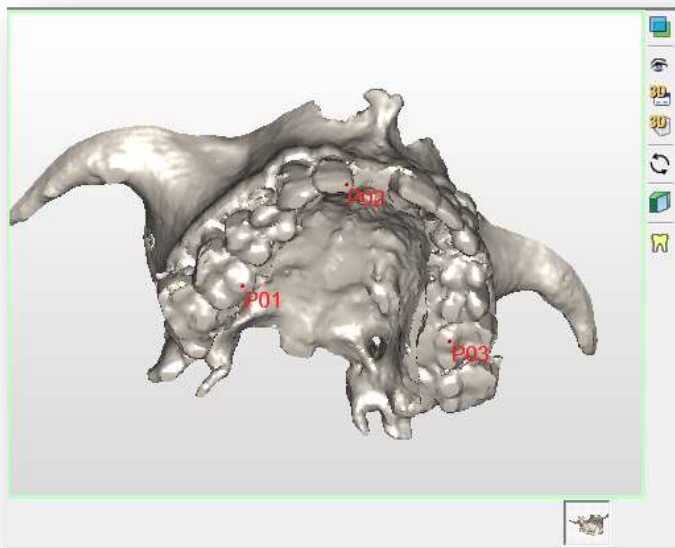




Now you can select the same tooth tip in the 3D model of the plaster cast (view (2)). Click the tooth tip point with the left mouse button (15). The point that you selected also gets marked as 'PO1' here (16).

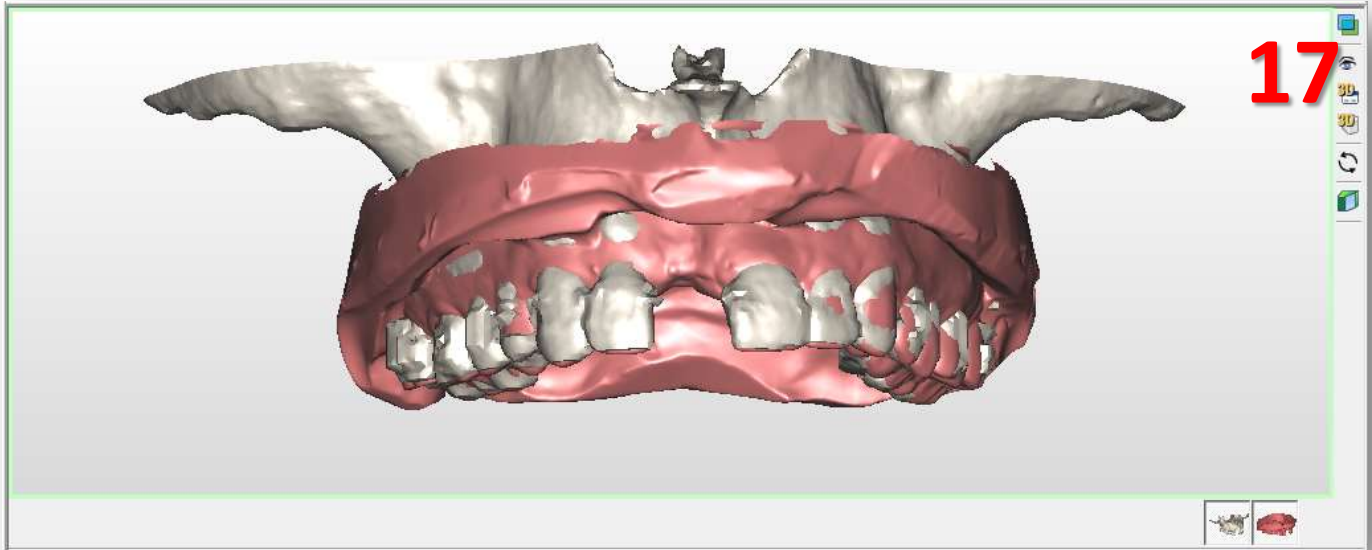


Repeat this operation for at least two more tooth tip points (11).

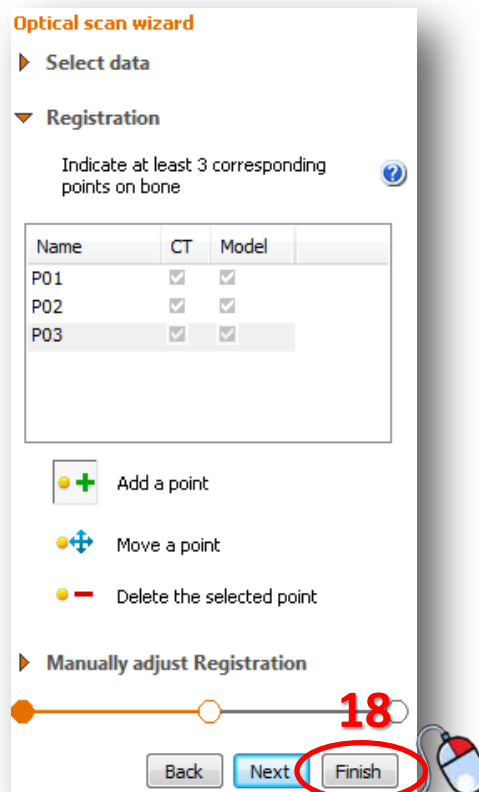




In the combined 3D view window (view (3)) you can see that the two 3D models are now matched on each other (17). Also, the additional 3D models (in this case the wax-up and the antagonist) will move along with the plaster cast when the position is changed.

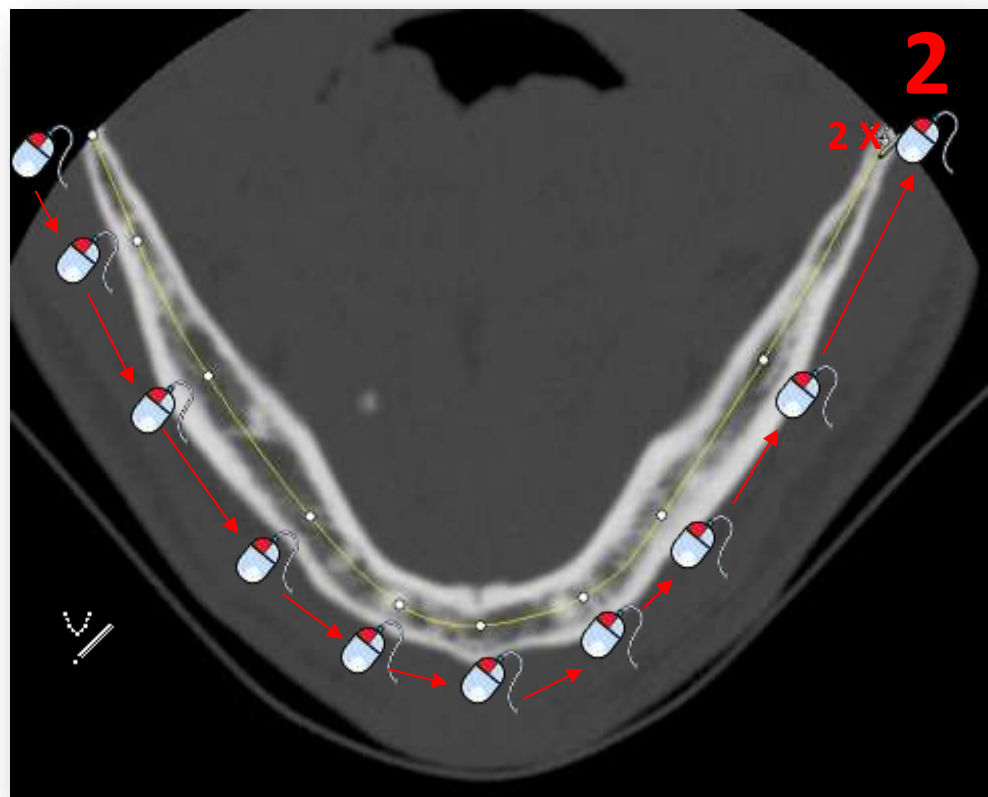
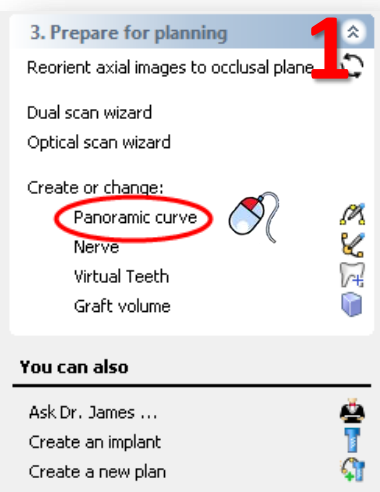


Click '*Finish*' to exit the Optical Scan wizard (18).



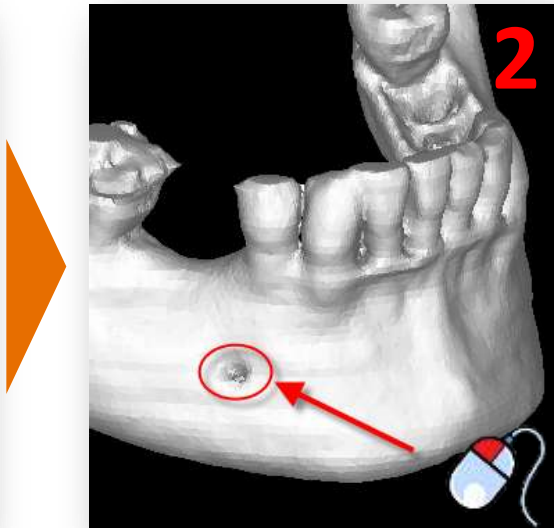
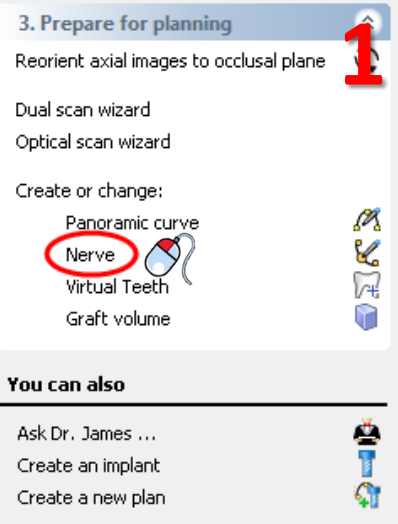


Select '*Panoramic curve*' in the task panel (1). Now you can start drawing the panoramic curve in the axial view (top right window). Click a number of points inside the bone to draw the panoramic curve and double-click the last point to finish the curve (2).

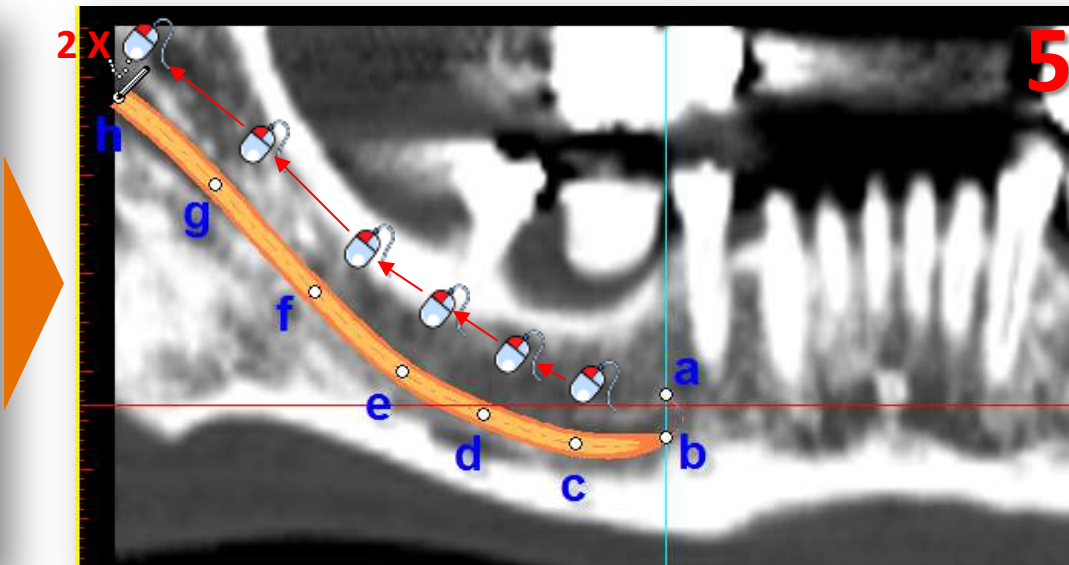
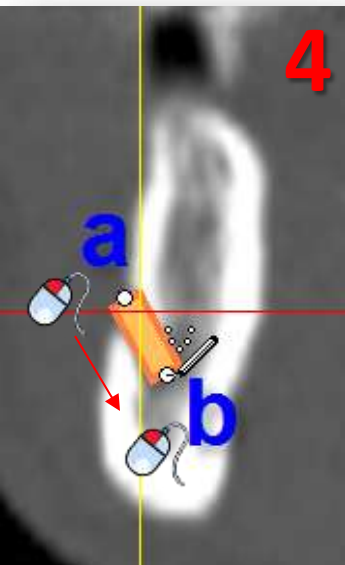


D. Draw the nerve

Select '*Nerve*' in the Task Panel to start drawing the nerve (1). In the 3D view window, click the entry point of the nerve in the mental foramen to move to the right slice in the 2D view windows (2). Click '*Add nerve*' to start drawing the nerve in the 2D view windows (3).



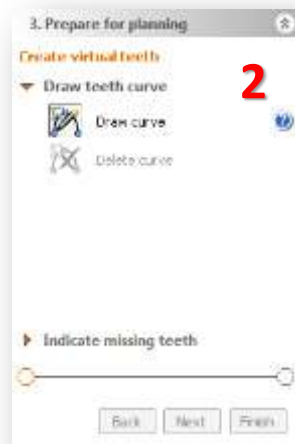
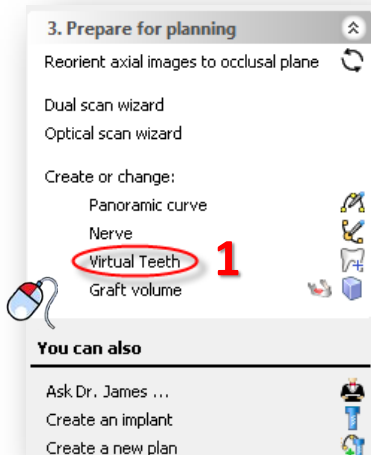
The cross-sectional view window (top left window) is already positioned on the right slice to start drawing the nerve. In this window, click the left mouse button to define the first points of the nerve (4) (points **a** and **b**). We will draw the rest of the nerve in the panoramic view window (bottom left window). Move the mouse cursor over to this panoramic view window and continue drawing the nerve here (5) (points **c** to **h**). To finish drawing the nerve, double-click on the last point (point **h**).



E. Create Virtual Teeth

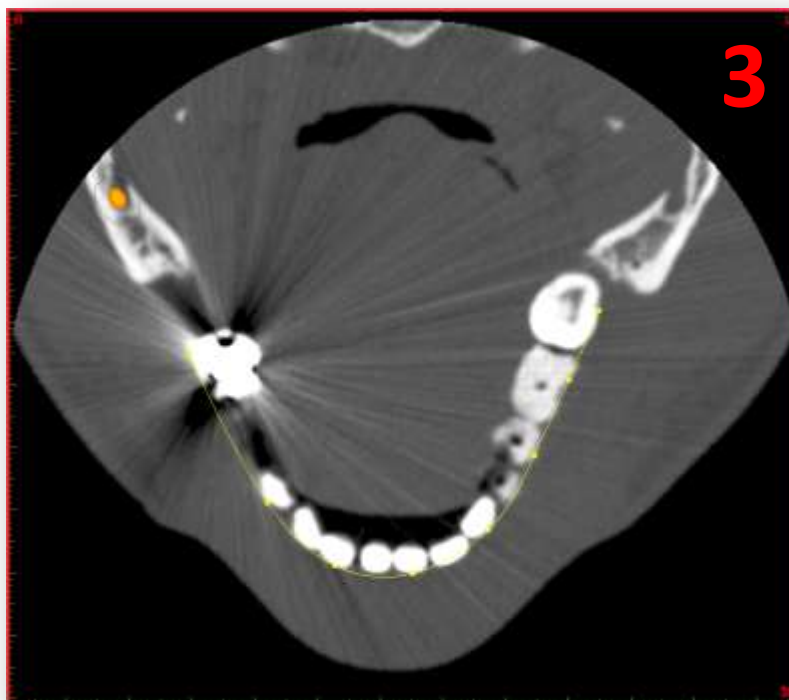
In this section we will explain how to place and modify Virtual Teeth.

In the Task Panel under *'Prepare for planning'* select *'Virtual Teeth'* (1). You will then enter the Virtual Teeth wizard (2). First we need to draw a teeth curve. The procedure is the same as drawing a panoramic curve. We will however draw the curve at tooth level and not at bone level. The virtual teeth are placed along the path of the teeth curve. You can also draw the curve while scrolling through the axial images, if necessary.



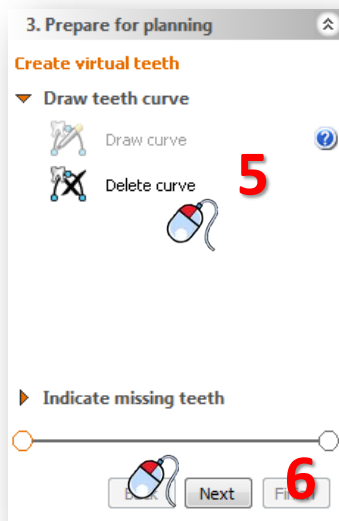
The axial images will be shown in full screen so you can draw the panoramic curve.

Scroll to a slice in which you can see the tooth tips clearly and draw a panoramic curve that follows the curvature of the teeth. It is best to draw the curve at the buccal side. (3)

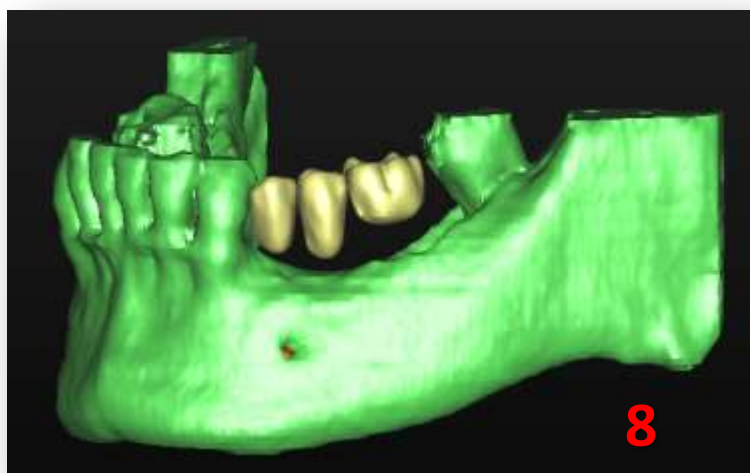
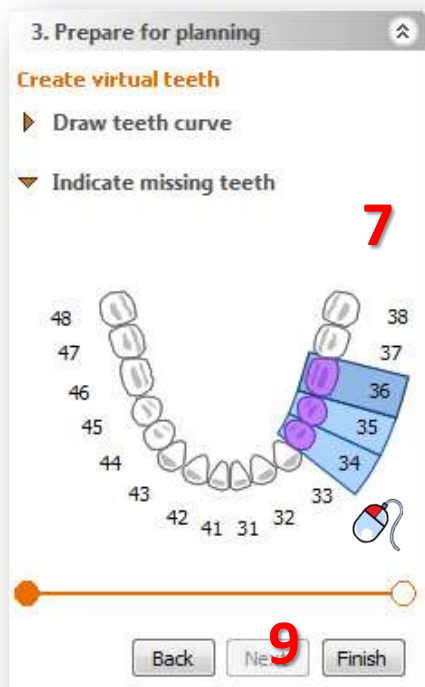





If you are not pleased with the panoramic curve you have drawn you can click '*Delete curve*' and draw a new curve (5). If the curve is well drawn, click the '*Next*' button to go to the next step (6).

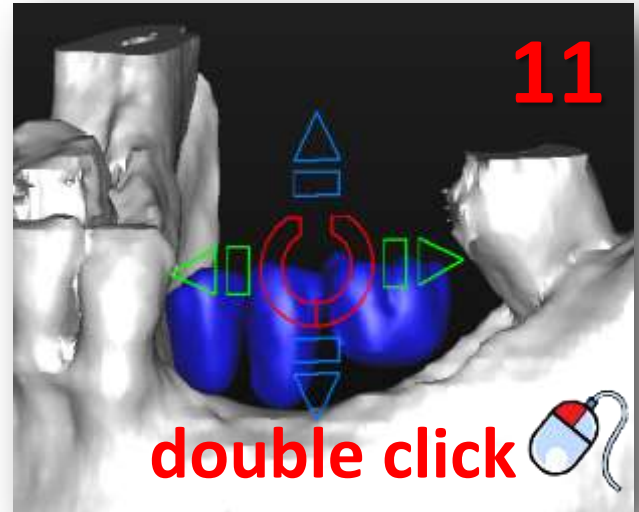
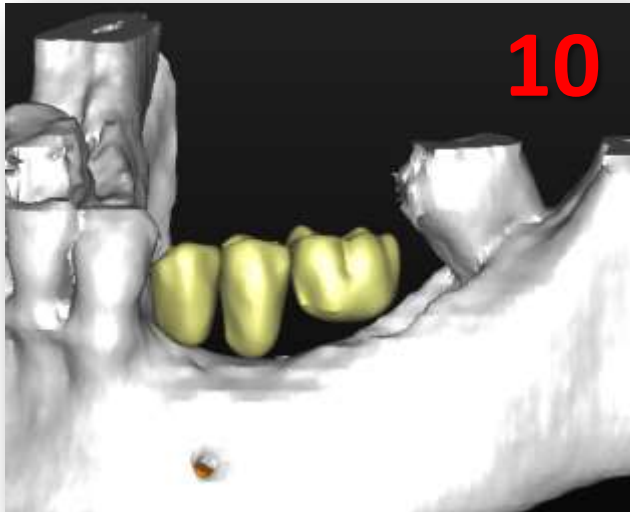


Select the teeth that you would like to create (7). The teeth will directly be added to the 3D view (8). Click '*Finish*' to exit the wizard (9).

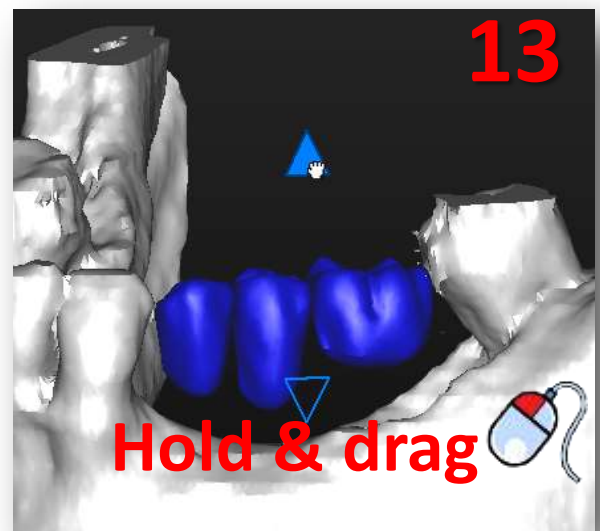
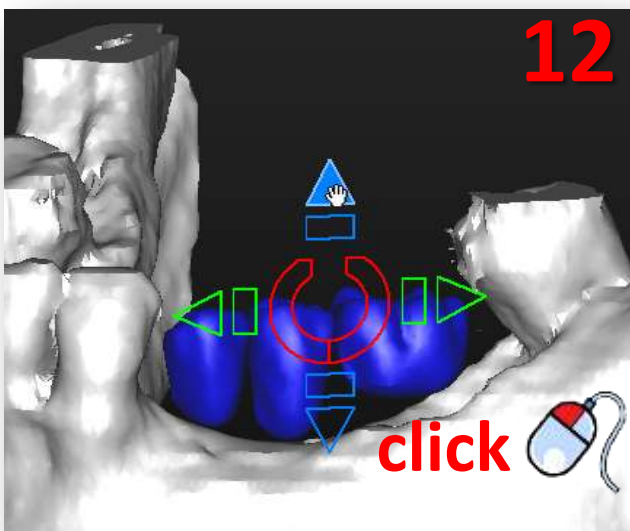




The three Virtual Teeth have been created (10). However, their position is not yet perfect. In the next steps we will show how you can change the position of the teeth. First we will move the 3 teeth together. To select all teeth hover over one of the teeth. A tooth symbol will be added to your cursor:  When you see this icon 'double click' to select all teeth (11). You will see the positional icon appear.

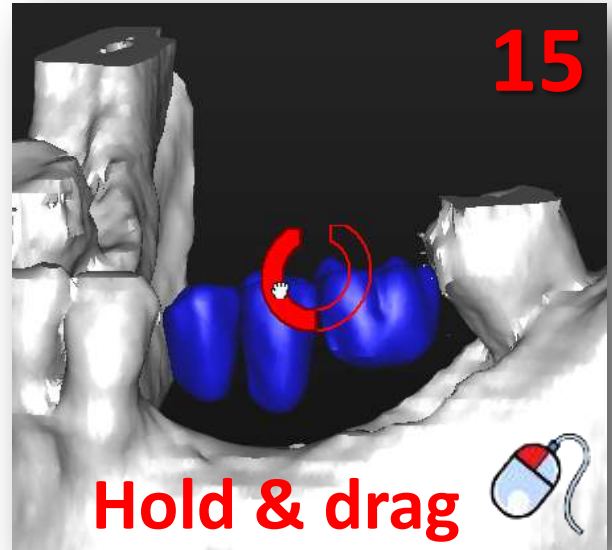
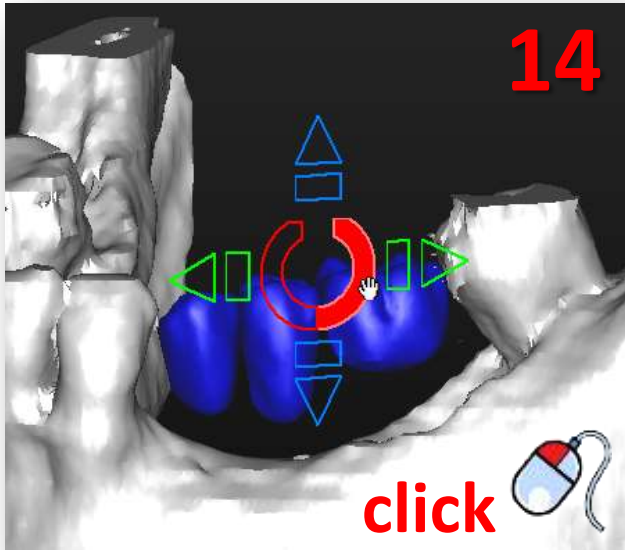


Use the arrows to move the teeth. You can do this in 2 ways. Click on an arrow to move the teeth in that direction (12). The other way to move the group of teeth is to click on an arrow and hold the left mouse button. Then drag the mouse in the direction in which you want to move the teeth (13). This is the fastest way to make changes to the teeth positions.

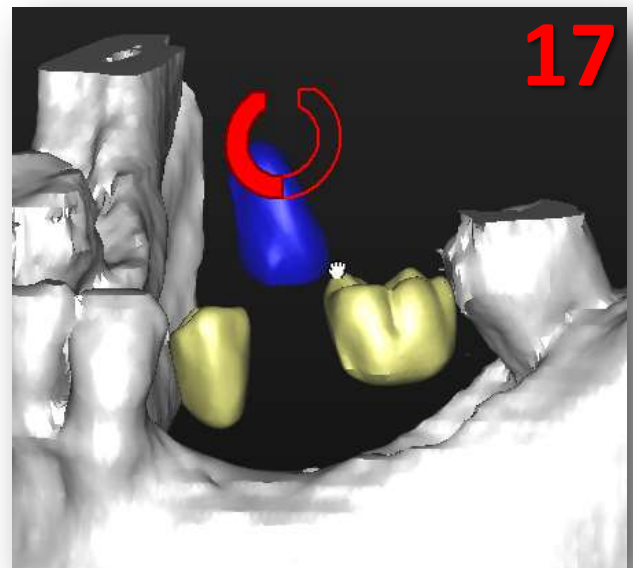
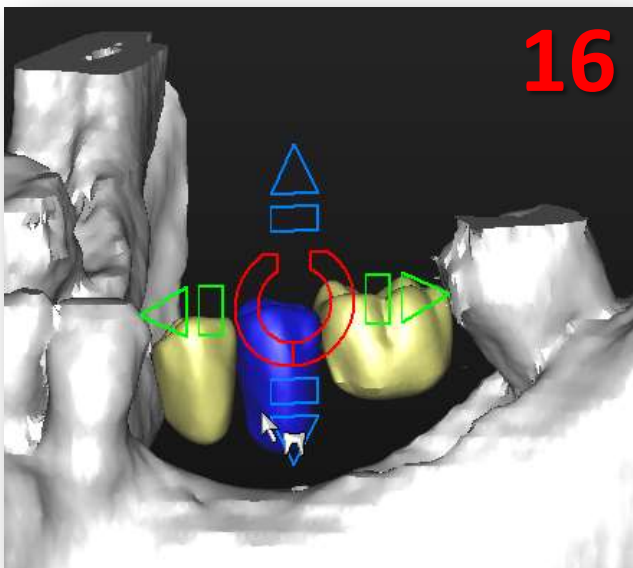




It is also possible to rotate the teeth. To do this use the round symbol in the middle of the positional icon. Either click the icon (14) or click, hold and drag the mouse (15).

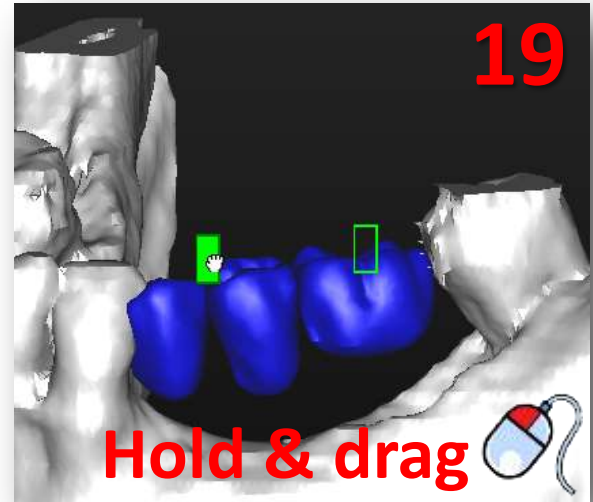
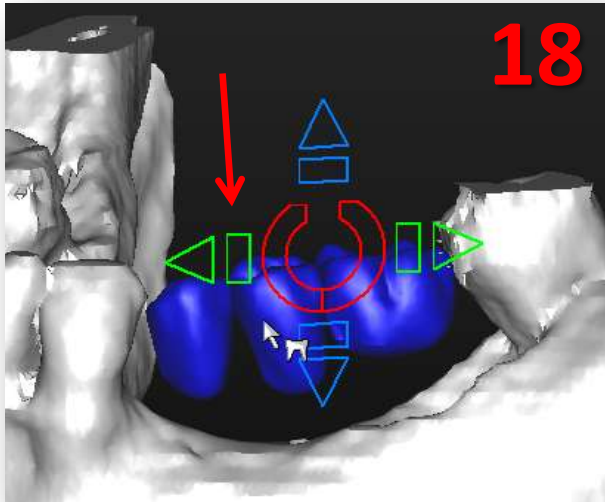


To make changes to the position of a single tooth click on a tooth to select it (16). Don't double click or you will select all teeth. Now it is possible to move and rotate the selected tooth. In (17) you can see an example of a rotated tooth.

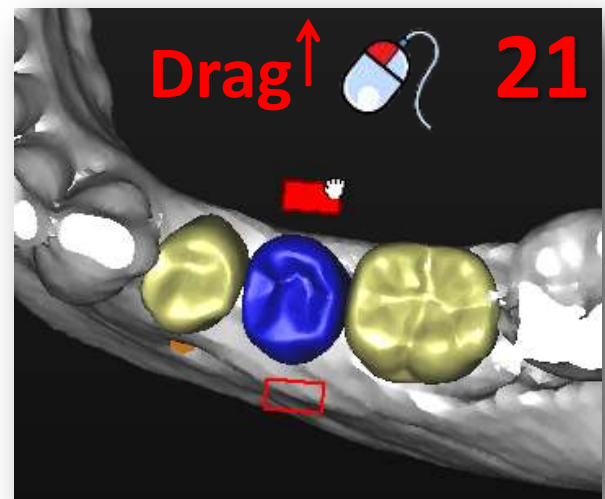
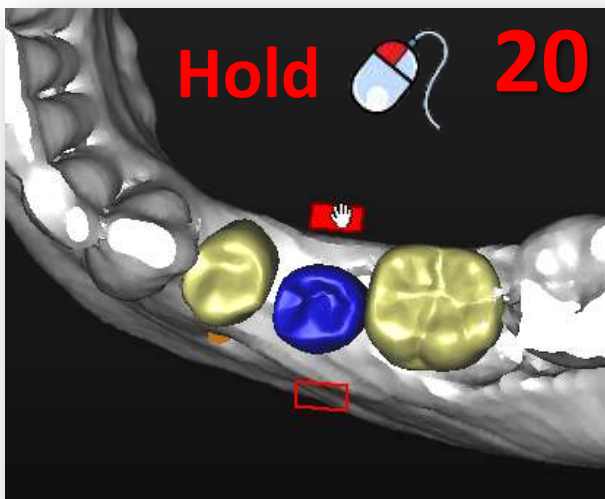




We can also change the size of the virtual teeth. We can do this by using the rectangular shapes (18). Click and hold the left mouse button. If we drag with the mouse we can change the size of the teeth in that direction. In this example we'll shrink the teeth by moving the mouse to the right and enlarge them by moving to the left (19).



Changing the size of a single tooth is done in the same way. Select a single teeth and use the rectangular icon (20) (21). The positional icon will change with the viewing direction of the 3D view. This way we can move the teeth in every clinical direction.

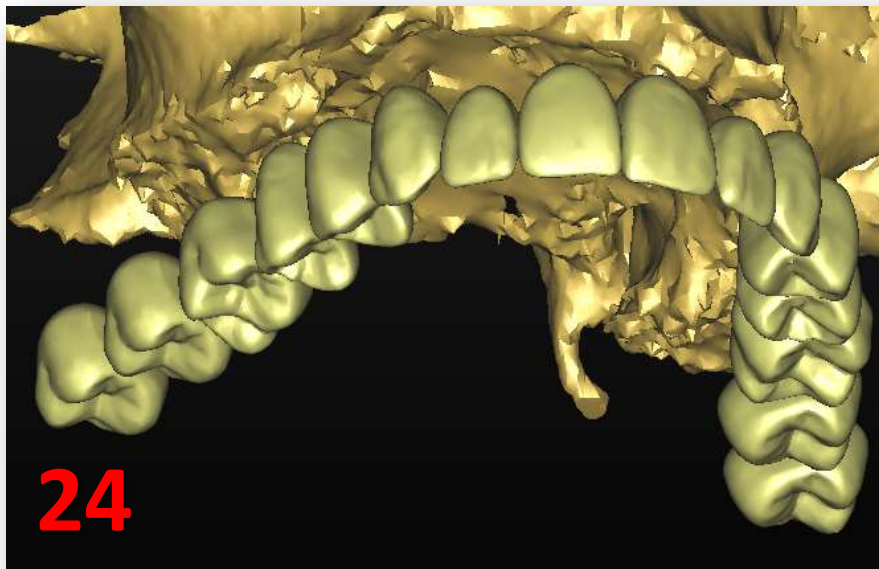




When we have a fully edentulous jaw we can create a full set of teeth by using the virtual teeth wizard. First select the outer tooth of the bridge (**22**). Then move your mouse to the other outer tooth, hold in the Shift key and click the tooth. All the teeth in between will be selected (**23**).

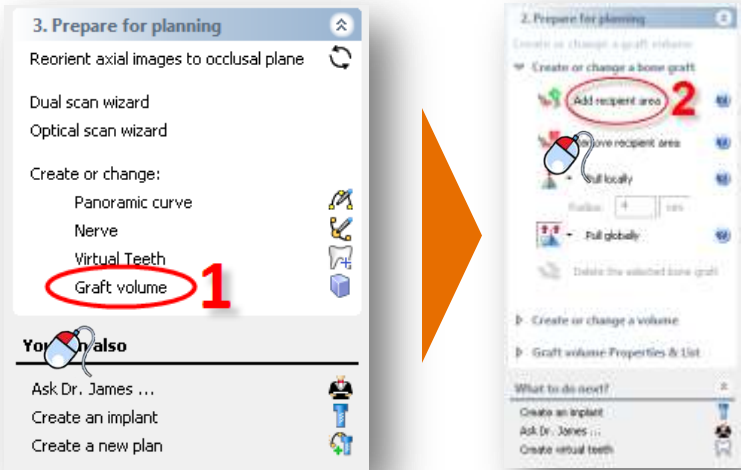


The result is a full arch of virtual teeth (**24**).

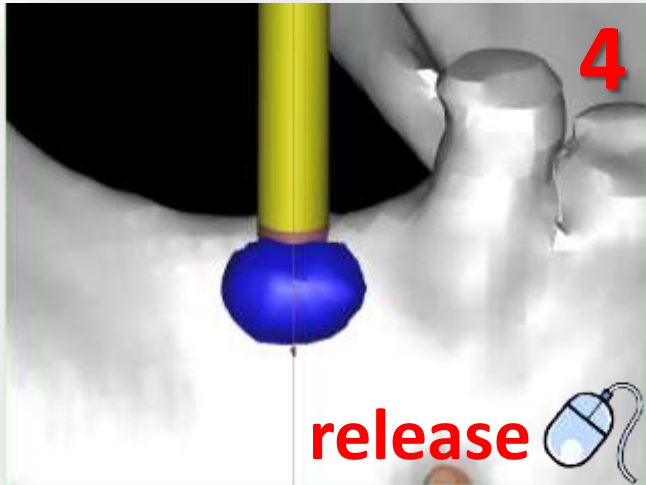
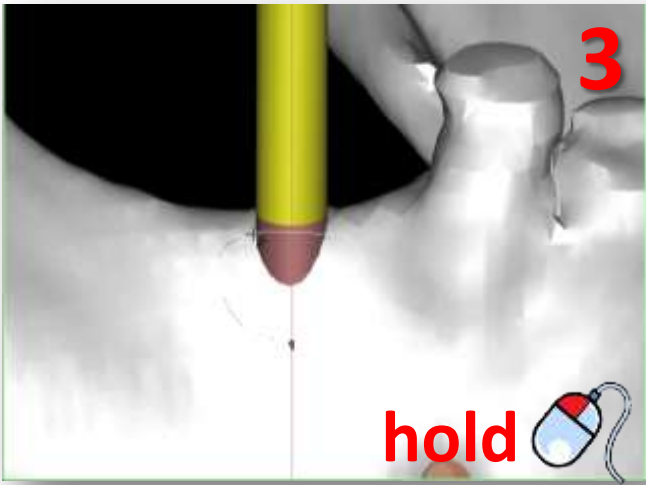


F. Create graft volume

In this section we will create and modify a graft volume. In the Task Panel under 'Prepare for planning' select 'Graft volume' (1). Afterwards, select 'Add recipient area' (2).

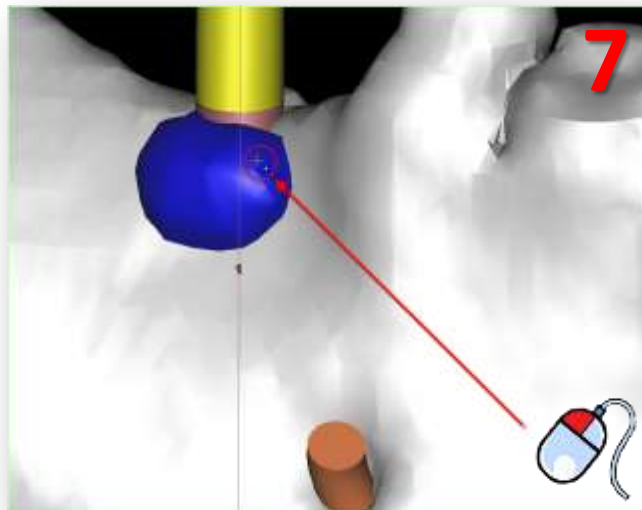
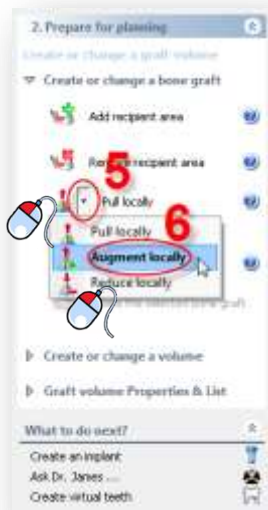


To create a graft volume, click and hold the left mouse button and draw a circle around the area where you would like to place the bone graft (3). When you release the mouse button, a blue volume appears (4). This blue volume is the graft volume.

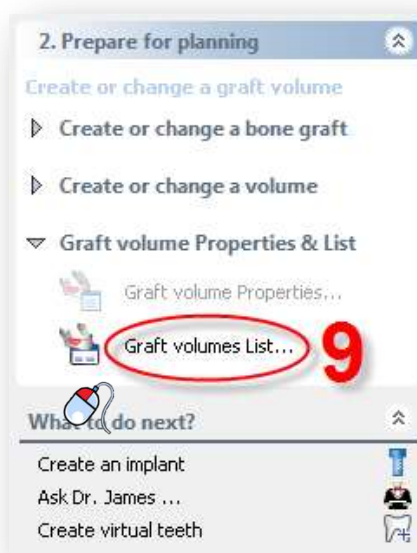
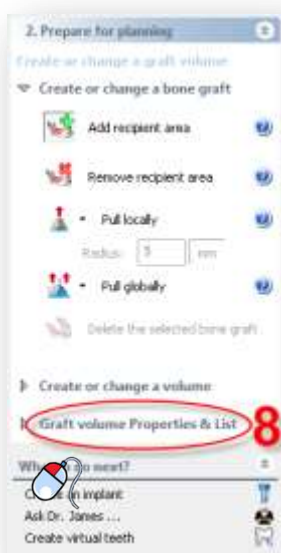




Now you can modify the graft volume that you have selected. In the Task Panel click the arrow next to 'Pull locally' (5). From the drop-down menu select 'Augment locally' (6). Now you can increase the thickness of the graft volume by clicking somewhere on it with the left mouse button (7). In the same way you can reduce the thickness of the graft volume by using the 'Reduce locally' tool.

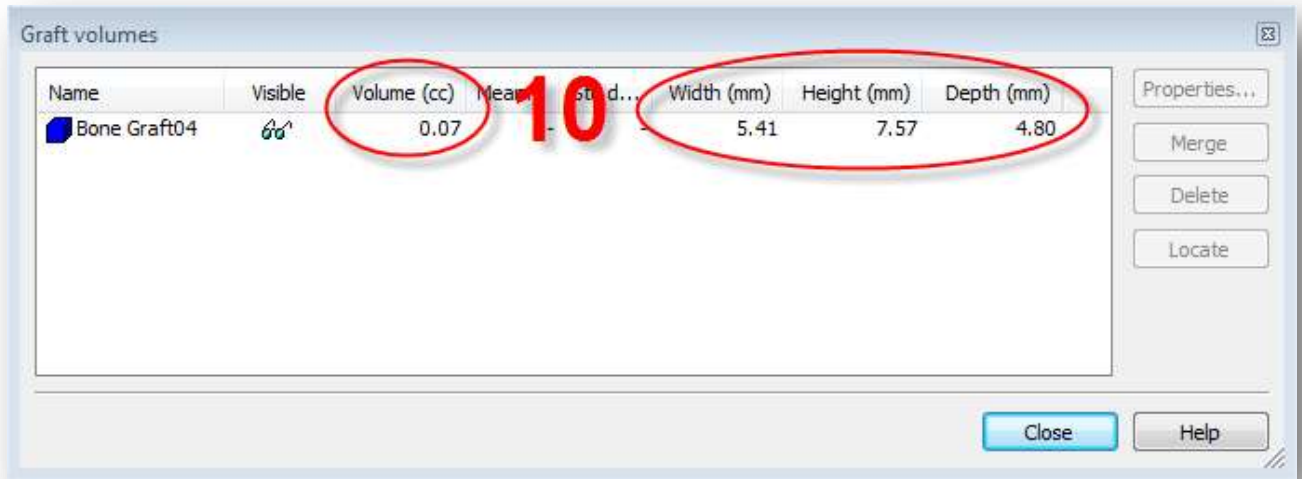


Next we can review the dimensions of the graft volume that we have just created. In the Task Panel select 'Graft volume Properties & List' (8). Afterwards, select 'Graft volumes List' (9).





In the 'Graft volumes' window, you can check the dimensions of the bone graft (10).



G. Make measurements



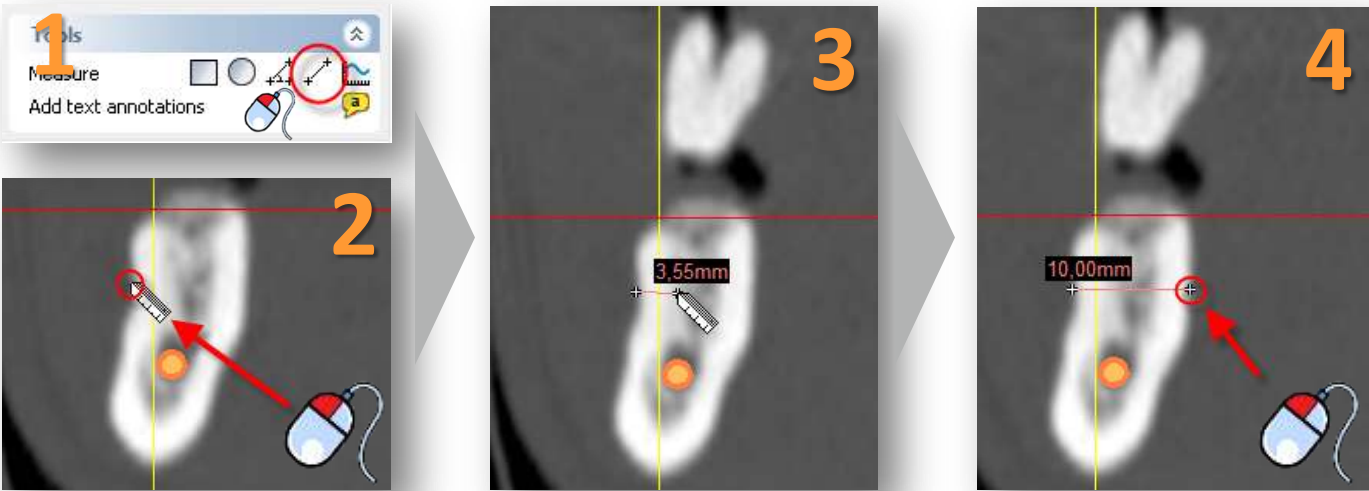
Before you start placing implants you might want to make some measurements on the bone area where you would like to place the implant. You can:

- A Measure distance
- B Measure angle
- C Measure density
- D Profile line

A. Measure distance



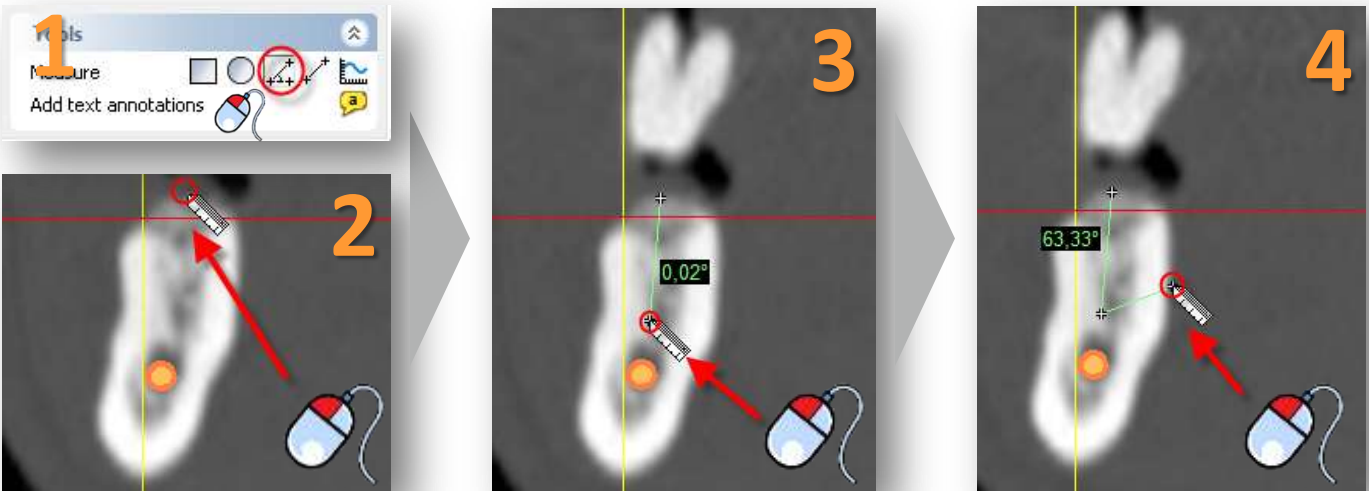
Click the measure icon on the bottom of the Task Panel (1). Click the first point of the measurement (2). Move the mouse cursor to measure the distance in respect to the first point (3). Click the second point of the measurement (4).



B. Measure angle



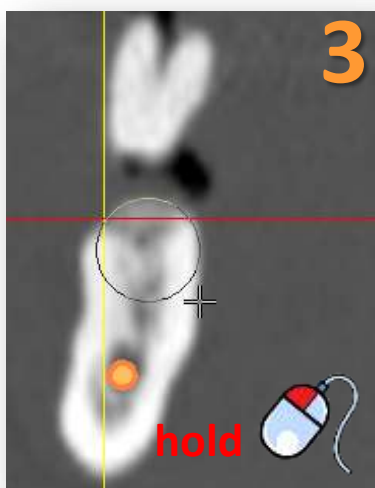
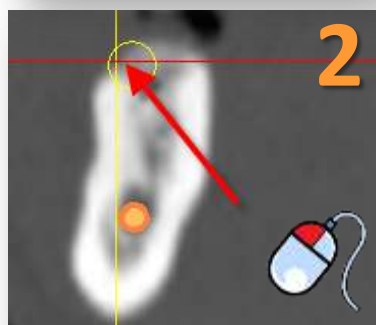
Click the measure angle icon on the bottom of the Task Panel (1). Click the first point of the angle (2). Click the second point of the angle (3). Click the third point of the angle (4).





You can measure the average bone density in a surface within the bone. You have the option to measure within a square surface or within an elliptical surface.

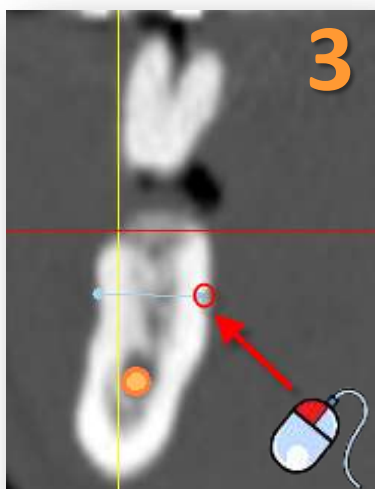
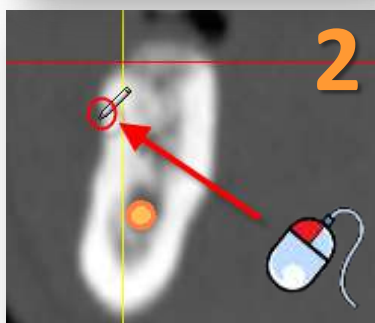
Click one of the two measure bone density icons on the bottom of the Task Panel (1). Click the first point of the measurement (2). Click and hold the left mouse button to drag a circle around the area that you are interested in (3). Release the mouse button to see the results of the measurement (4).



D. Profile line

You can create a profile line of the bone density.

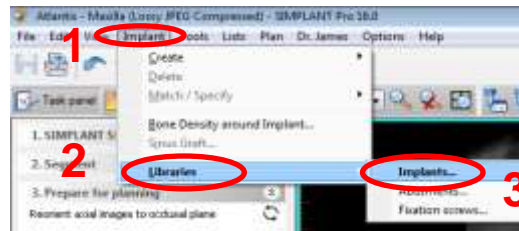
Click the profile line icon on the bottom of the Task Panel (1). Click the first point of section of the bone that you want to calculate the profile line for (2). Click the second point of the line (3). The profile line is now shown (4).



4. Plan implants

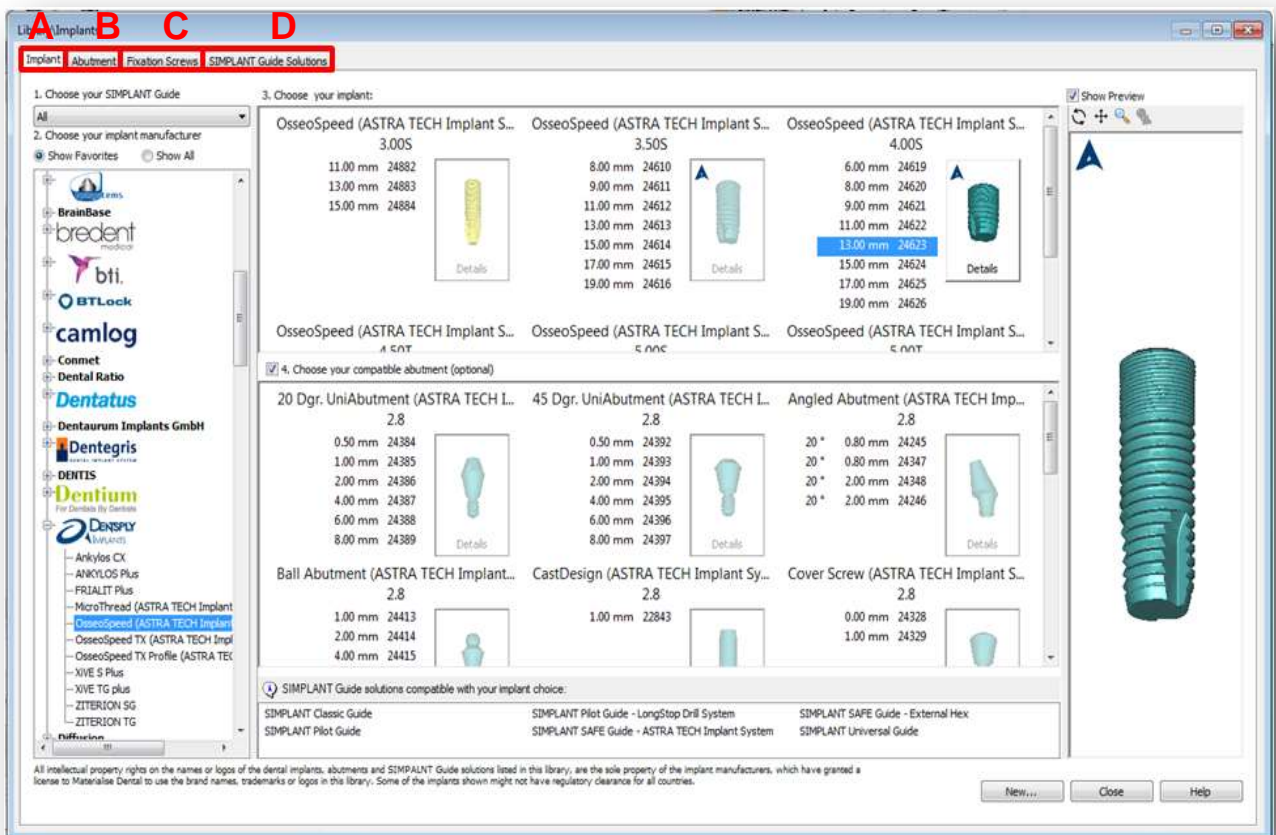
4.1. The implant library

Here you will find an introduction on how to use the implant library. To access the implant library select 'Implant' from the menu (1), then 'Libraries' (2) and finally 'Implants' (3).



The implant library consists of following tab pages:

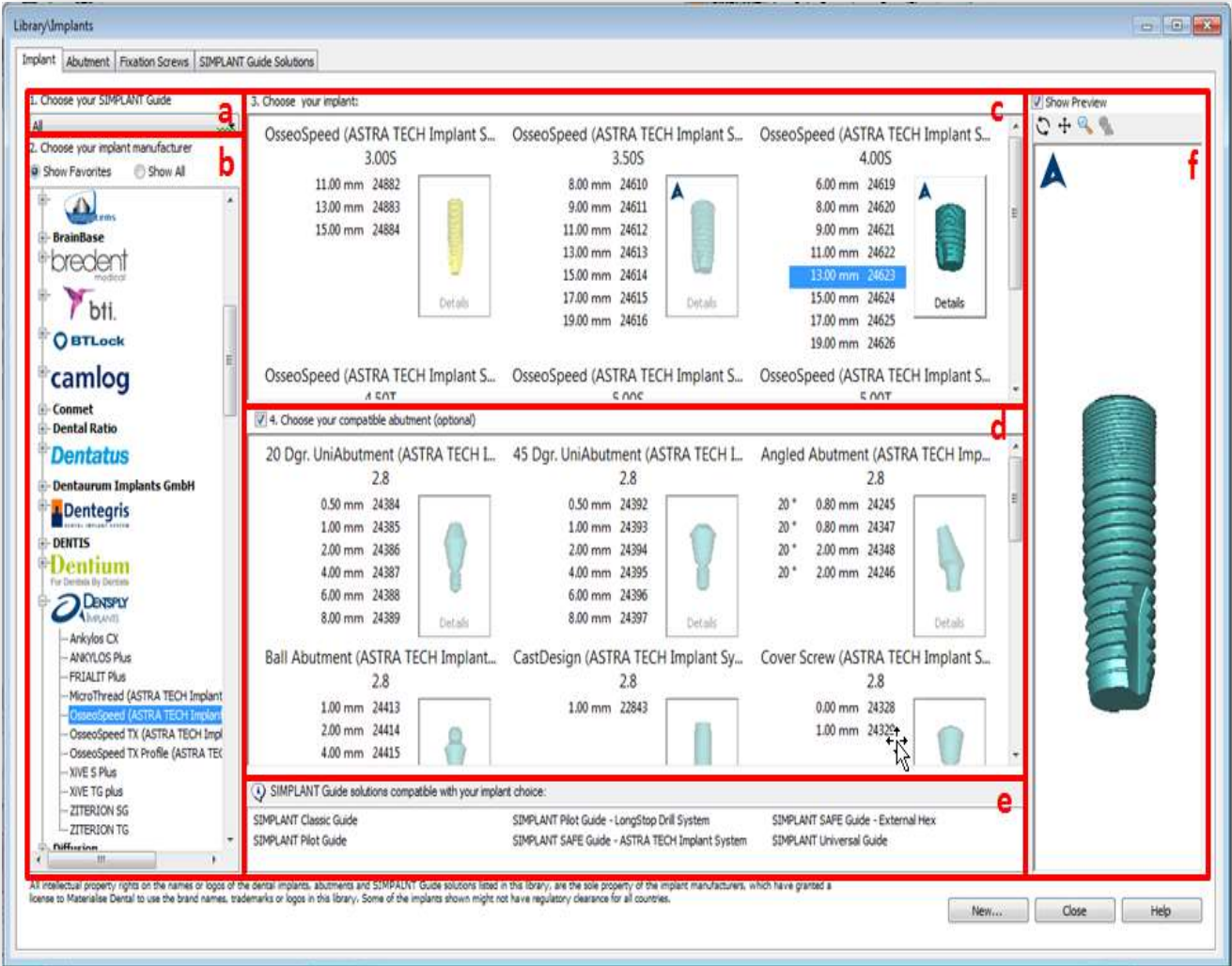
- A Implant
- B Abutment
- C Fixation Screws
- D SIMPLANT Guide Solutions





On this tab you get an overview of all the available implants in the SIMPLANT software. On this tab, following areas can be distinguished:

- a 'Choose your SIMPLANT Guide'
- b 'Choose your implant manufacturer'
- c 'Choose your implant'
- d 'Choose your compatible abutment'
- e 'SIMPLANT Guide solutions compatible with your implant choice'
- f 'Show Preview'



a. Choose your SIMPLANT® Guide



Here you can choose which SIMPLANT Guide you would like to use in advance of selecting your implants. This way only the compatible implants will be shown. For instance, when you select 'Compatible with Astra Tech Implant System' only those implants that are compatible with the Astra Tech Implant System guide will be visible. You also have to select a SIMPLANT Guide type if you want to see a preview of the **tubes** when planning an implant.

1. Choose your SIMPLANT Guide

All

All

Compatible with SIMPLANT Classic Guide

Compatible with SIMPLANT Pilot Guide

Compatible with SIMPLANT Pilot Guide - LongStop Drill System

Compatible with SIMPLANT SAFE Guide - ANKYLOS

Compatible with SIMPLANT SAFE Guide - ASTRA TECH Implant System

Compatible with SIMPLANT SAFE Guide - Anthogyr

b. Choose your implant manufacturer

Here you can choose the implant manufacturer and product line of implants you would like to use. On top you can select if you would like to see all the implant brands or only your favorite implant brands (1).



2. Choose your implant manufacturer

☒ Show Favorites

☐ Show All

1

If you select 'Show Favorites' only your favorite implant brands and their logos are shown (2). If you select 'Show All', all implant brands are shown (3). Right-click on an implant brand and select 'Add manufacturer to favorites' to add the implant brand to the favorites (4).

2. Choose your implant manufacturer:

☒ Show Favorites

☐ Show All

anthogyr

COMET 3

camlog

Dentaurum

Ankylos CX

ANKYLOS Plus

PRIALIT Plus

MicroThread (ASTRA TECH Implant System)

OsseoSpeed (ASTRA TECH Implant System)

OsseoSpeed TX (ASTRA TECH Implant System)

OsseoSpeed TX Profile (ASTRA TECH Implant System)

XIVE S Plus

XIVE TG plus

ZITERION SG

ZITERION TG

Nobel Biocare

SIC

straumann

cosmesil

2. Choose your implant manufacturer:

☐ Show Favorites

☒ Show All

COMET 3

BIOTECH

BIS

BONE ST M

BrainBase

breident

bti.

BTLock

camlog

Conmet

Dental Ratio

Dentatus

Dentaurum Implants GmbH

Dentegris

DENTIS

Dentium

Dentaurum Implants GmbH

DENTIS

Dentium

Diffusion

DIO IMPLANT

Dr. Thde

DYNA

2. Choose your implant manufacturer:

☐ Show Favorites

☒ Show All

BTLock

camlog

Conmet

Dental Ratio

Dentatus

Dentaurum Implants GmbH

Dentegris

DENTIS

Dentium

Dentaurum Implants GmbH

DENTIS

Dentium

Diffusion

DIO IMPLANT

Dr. Thde

DYNA

Easy Grip

4. Choose your implant manufacturer:

☐ Show Favorites

☒ Show All

BTLock

camlog

Conmet

Dental Ratio

Dentatus

Dentaurum Implants GmbH

Dentegris

DENTIS

Dentium

Dentaurum Implants GmbH

DENTIS

Dentium

Diffusion

DIO IMPLANT

Dr. Thde


DYNA

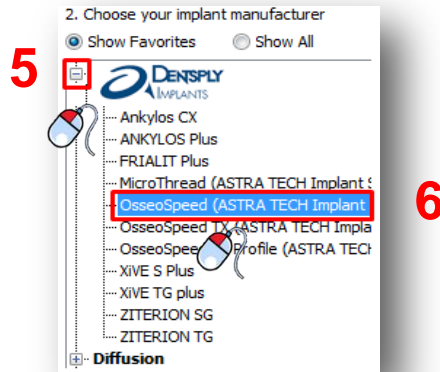
Easy Grip

Add manufacturer to favorites

4

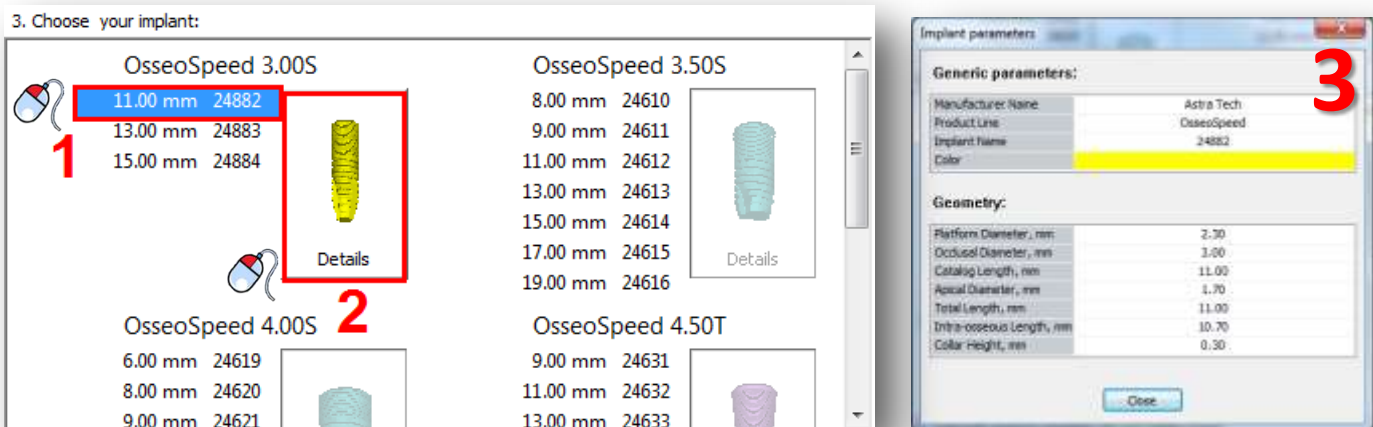


Click the  sign to open up an implant manufacturer's product line overview (5), and select a product line from the list (6).

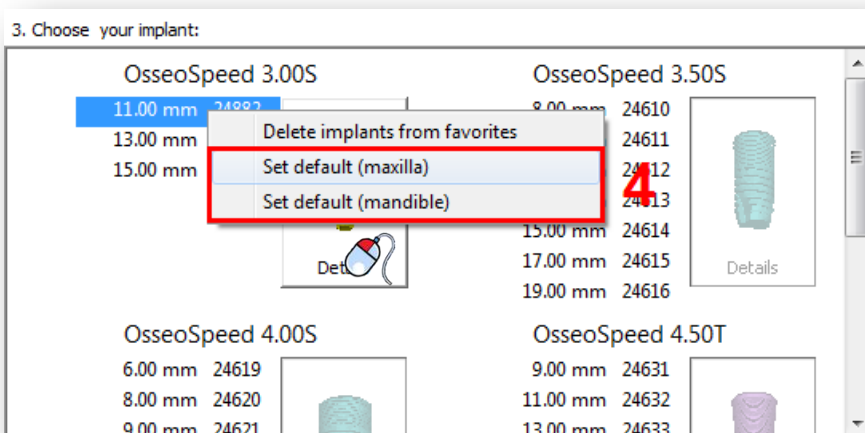


c. Choose your implant

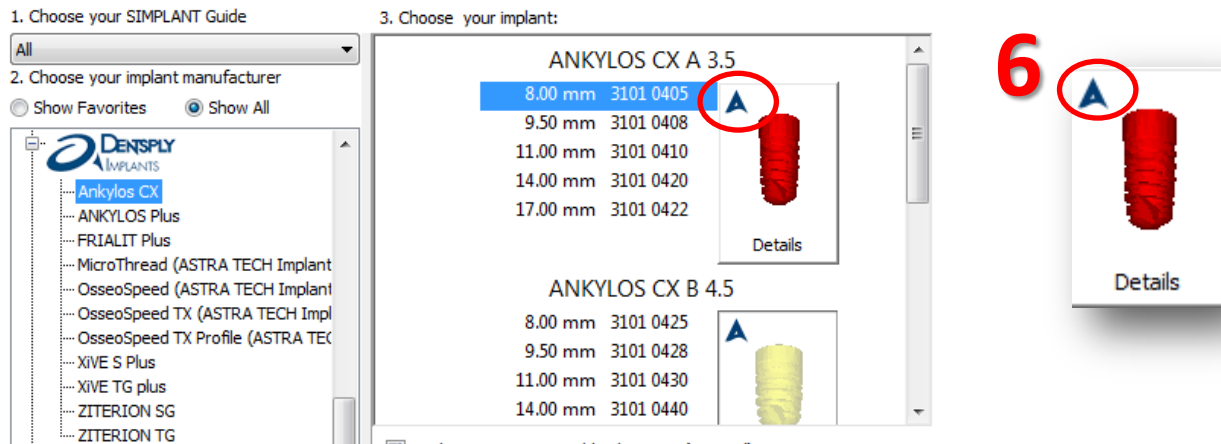
Here you can select a specific implant you would like to use (1). If you click the 'Details' button (2), the 'Implant parameters' dialog pops up (3).



When you right-click on an implant you can choose to set it as the default implant for your mandible and/or maxilla projects (4).



Some implants are compatible with the Immediate Smile – Featuring ATLANTIS Abutment solution. When planning such an implant, you will be able to order a patient-specific ATLANTIS Abutment together with the SIMPLANT SAFE Guide. These implants have the ATLANTIS icon in the top left corner of the ‘Details’ button(6).



It is also shown in the top left corner of the implant preview window (7).




d. Choose your compatible abutment




Here you can select a specific abutment you would like to use (1). Only the abutments that are compatible with the selected implant are shown here. If you click the 'Details' button (2), the 'Abutment parameters' dialog pops up (3).

☒ 4. Choose your compatible abutment (optional)


Cover Screw 2.3
0.00 mm 24198


Details

Healing Abutment 2.3
2.00 mm 24777
4.00 mm 24778


Details

TiDesign 2.3
15 ° 0.00 mm 24790
1.00 mm 24788
2.00 mm 24789


2

Abutment parameters

Generic parameters:

Manufacturer Name	Astra Tech
Product Line	TiDesign
Abutment name	24788
Color	

Geometry:

Platform Diameter, mm	2.3
Collar height, mm	1.00
Angulation, °	0.00
Connection	12
Extension height, mm	1.00

Close

e. SIMPLANT® Guide solutions compatible with your implant choice

In this area all the SIMPLANT Guide solutions are shown that are compatible with the implant you have selected.

SIMPLANT Guide solutions compatible with your implant choice:

SIMPLANT Classic Guide
SIMPLANT Pilot Guide

SIMPLANT Pilot Guide - LongStop Drill System
SIMPLANT SAFE Guide - ANKYLOS

SIMPLANT SAFE Guide - External Hex
SIMPLANT Universal Guide

f. SIMPLANT® Guide solutions compatible with your implant choice

In this area all you can see a 3D preview of the implant you have selected.





On this tab you get an overview of all the available abutments in the SIMPLANT software. This tab is very similar to the 'Implant' tab.

Library/Abutments

ImplantAbutmentPosition ScrewsSIMPLANT Guide Solutions

1. Choose your abutment manufacturer

CHECKPOINT

BON SYSTEM

BrainBase

bredent

STLock

camlog

Conmet

Dentaurum Implants GmbH

DENTAL DYNASTY

20 Dgr., UniA MT OS (ASTRA TECH)

20 Dgr., UniAbutment (ASTRA TECH)

45 Dgr., UniA MT OS (ASTRA TECH)

45 Dgr., UniAbutment (ASTRA TECH)

Angl Abut.MT OS (ASTRA TECH 3in)

Angled Abutment (ASTRA TECH 3in)

ANKYLOS (DENTSPLY Friadent)

Ball Abut MT OS (ASTRA TECH Imp)

Ball Abutment (ASTRA TECH Implan)

CastDesign (ASTRA TECH Implan)

Cover Screw (ASTRA TECH Implan)

Direct Abutment (ASTRA TECH Imp)

FRIADENT CERICON (DENTSPLY Friadent)

FRIADENT EstheticBase (DENTSPLY Friadent)

FRIADENT MP (DENTSPLY Friadent)

Healing Abutment (ASTRA TECH 3in)

Healing Abutment Uni (ASTRA TECH)

Loc Abut MT OS (ASTRA TECH Imp)

Locator Abutment (ASTRA TECH 3in)

TempDesign (ASTRA TECH Implan)

Temporary Abutment (ASTRA TECH)

TiDesign (ASTRA TECH Implan Sys)

XIVE (DENTSPLY Friadent)

ZiDesign (ASTRA TECH Implan Sys)

2. Choose your abutment:

ANKYLOS (DENTSPLY Friadent)
Balance Anterior C

1.50 mm 31021590

15 ° 1.50 mm 31021590

1.50 mm 31021570

15 ° 1.50 mm 31021610

3.00 mm 31021560

15 ° 3.00 mm 31021620

15 ° 3.00 mm 31021600

3.00 mm 31021580

ANKYLOS (DENTSPLY Friadent)
Balance Anterior X

1.50 mm 31022750

15 ° 1.50 mm 31022710

15 ° 1.50 mm 31022730

15 ° 1.50 mm 31022770

15 ° 3.00 mm 31022775

3.00 mm 31022715

15 ° 3.00 mm 31022735

3.00 mm 31022755

ANKYLOS (DENTSPLY Friadent)
Balance Base

ANKYLOS (DENTSPLY Friadent)
Balance Base narrow angled

3. Choose your compatible implant

ANKYLOS CX A 3.5

8.00 mm 3101 0405

9.50 mm 3101 0408

11.00 mm 3101 0410

14.00 mm 3101 0420

17.00 mm 3101 0422

ANKYLOS CX B 4.5

8.00 mm 3101 0425

9.50 mm 3101 0428

11.00 mm 3101 0430

14.00 mm 3101 0440

17.00 mm 3101 0450

ANKYLOS CX C 5.5

8.00 mm 3101 0453

9.50 mm 3101 0455

11.00 mm 3101 0456

14.00 mm 3101 0460

17.00 mm 3101 0470

ANKYLOS CX D 7.0

8.00 mm 3101 0472

9.50 mm 3101 0474

11.00 mm 3101 0476

14.00 mm 3101 0478

4. SIMPLANT Guide solutions compatible with your implant choice:

SIMPLANT Classic Guide

SIMPLANT Pilot Guide

SIMPLANT Pilot Guide - LongStop Drill System

SIMPLANT SAFE Guide - ANKYLOS

SIMPLANT SAFE Guide - External Hex

SIMPLANT Universal Guide

Show Preview

Close

Help

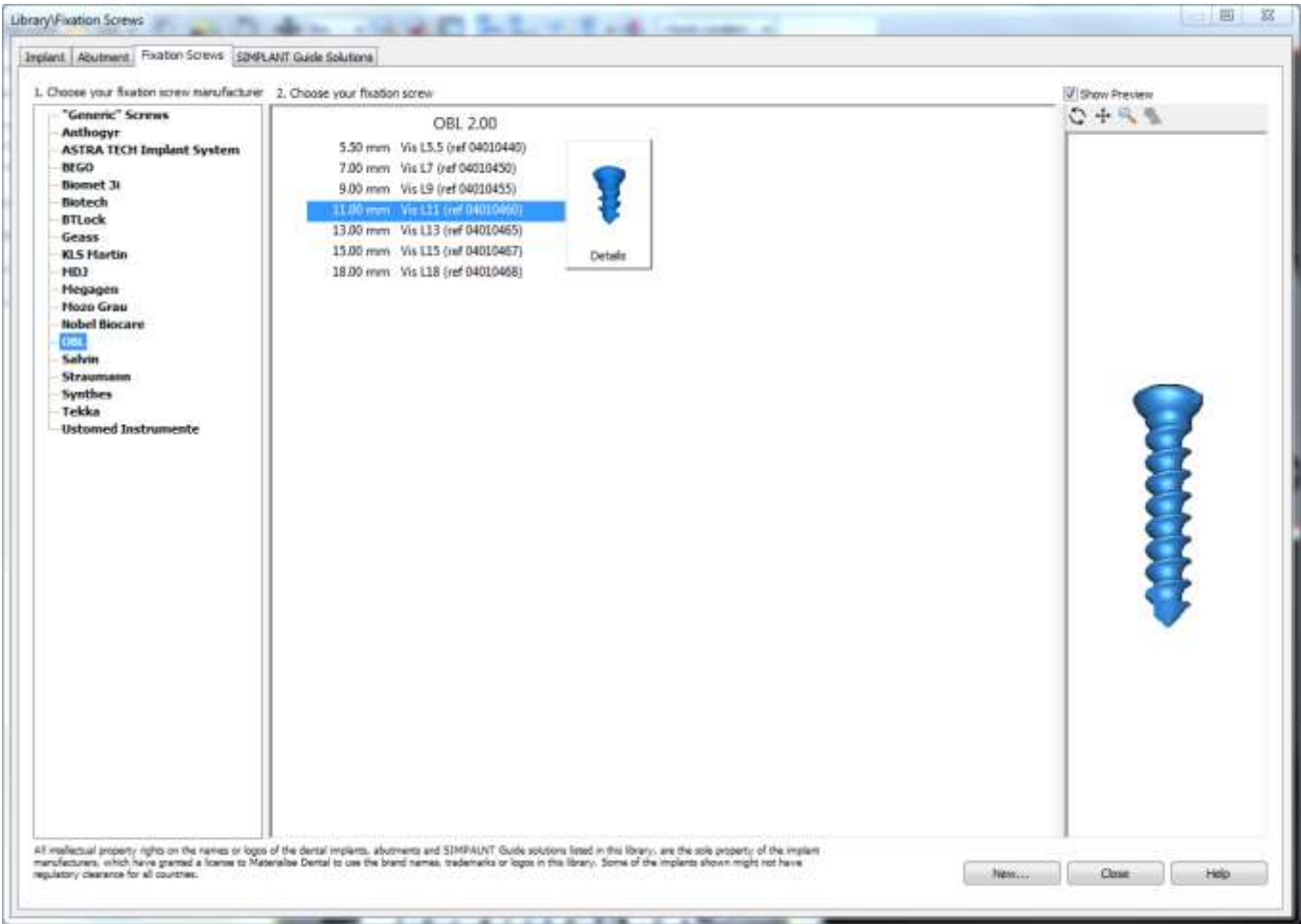
All intellectual property rights on the names or logos of the dental implants, abutments and SIMPLANT Guide solutions listed in this library, are the sole property of the implant manufacturers, which have granted a license to Materialise Dental to use the brand names, trademarks or logos in this library. Some of the implants shown might not have regulatory clearance for all countries.

4. Plan implants

73



On this tab you get an overview of all the available fixation screws in the SIMPLANT software. This tab is also very similar to the 'Implant' tab.





On this tab you can find some more information on the different SIMPLANT Guide solutions. The SIMPLANT Guide systems are ordered by category. You can see which manufacturers have a SAFE system.

Library/SIMPLANT Guides

ImplantAbutmentFixation ScrewsSIMPLANT Guide Solutions

Manufacturers' Solutions:

SIMPLANT SAFE Guide - A2

SIMPLANT SAFE Guide - X1

SIMPLANT SAFE Guide - A1

SIMPLANT Universal Guide

Maximum compatibility with drills and implants.

What characterizes this SIMPLANT Universal Guide system?

Drill guidance	YES (drill keys)
Drill depth control	NO/YES (LongStop)
Implant guidance	NO
Implant depth control	NO
Key properties	<ul style="list-style-type: none">Compatible with all implants brandsCompatible with all drill brandsStandard surgical kit can be used
Recommended use	Advised for most cases when no brand specific guided surgery kit is available. Excellent alternative for SIMPLANT Classic Guide.

<<Show compatible implants

Close

Help

All intellectual property rights on the names or logos of the dental implants, abutments and SIMPLANT Guide solutions listed in the library, are the sole property of the implant manufacturers, which have granted a license to Materialise Dental to use the brand names, trademarks or logos in this library. Some of the implants shown might not have regulatory clearance for all countries.



Select ‘Create or change an implant’ in the Task Panel to start placing implants.



There are two ways to place an implant:

- A ‘Place an implant’: 1-click method
- B ‘Draw an implant’: 2-click method

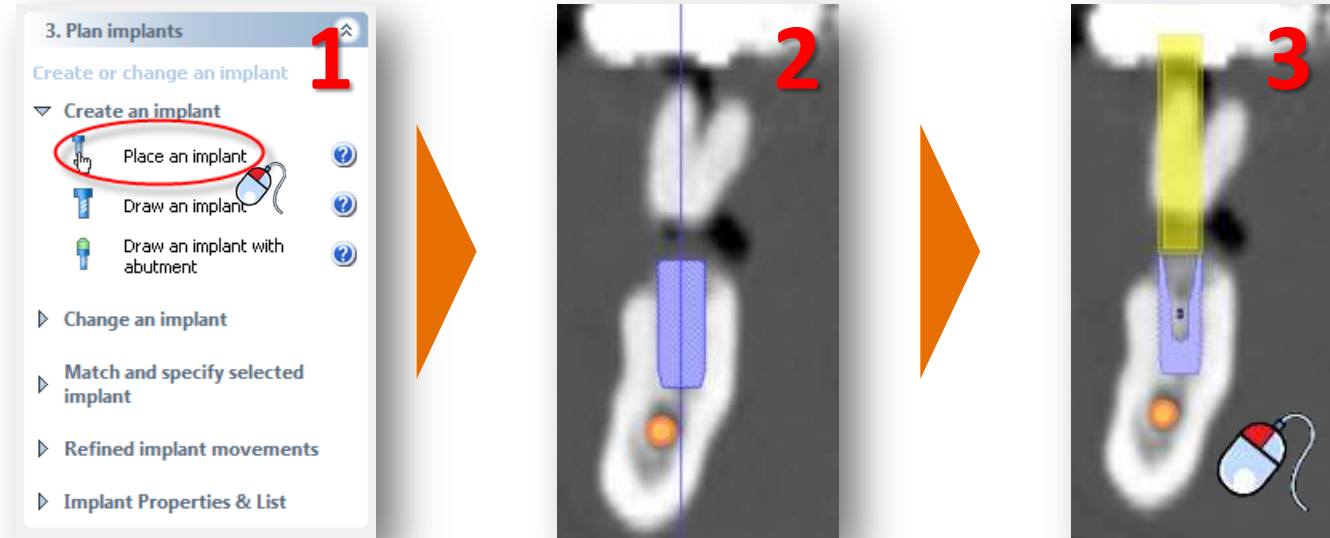
After placing the implants you can:

- C Specify the implant type
- D Change the position and length of the implant
- E View the implant properties
- F View the implants list
- G Check for collisions

A. Place an implant



Select ‘Place an implant’ in the Task Panel (1). In one of the 2D view windows, position your mouse cursor on the location where you would like to place the implant (2). Press the left mouse button once to drop the implant on that location (3).



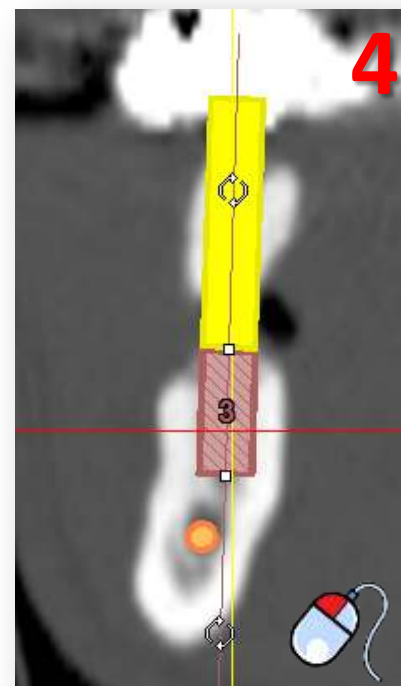
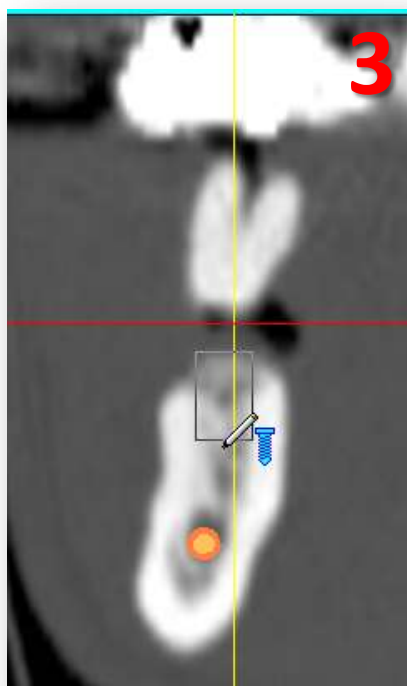
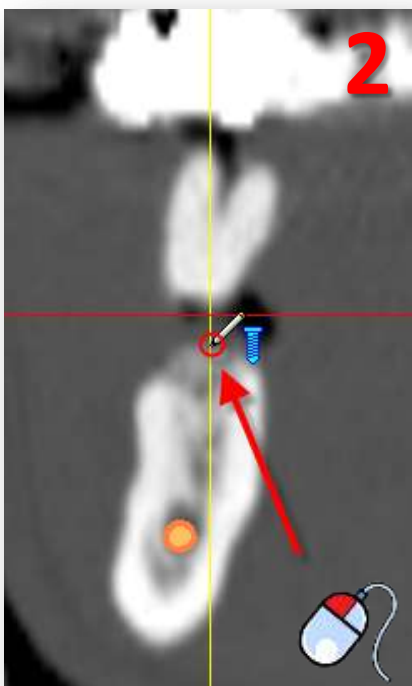
B. Draw an implant



Select '*Draw an implant*' in the Task Panel (1). With this function you can define an implant with two mouse clicks.



The first click defines the point of entry for the implant (2). After you have selected this point, you can define the length and orientation of the implant by moving the mouse cursor (3). Finally, when you are satisfied with the implant size and orientation, you can click a second time with the left mouse button to place the implant (4).

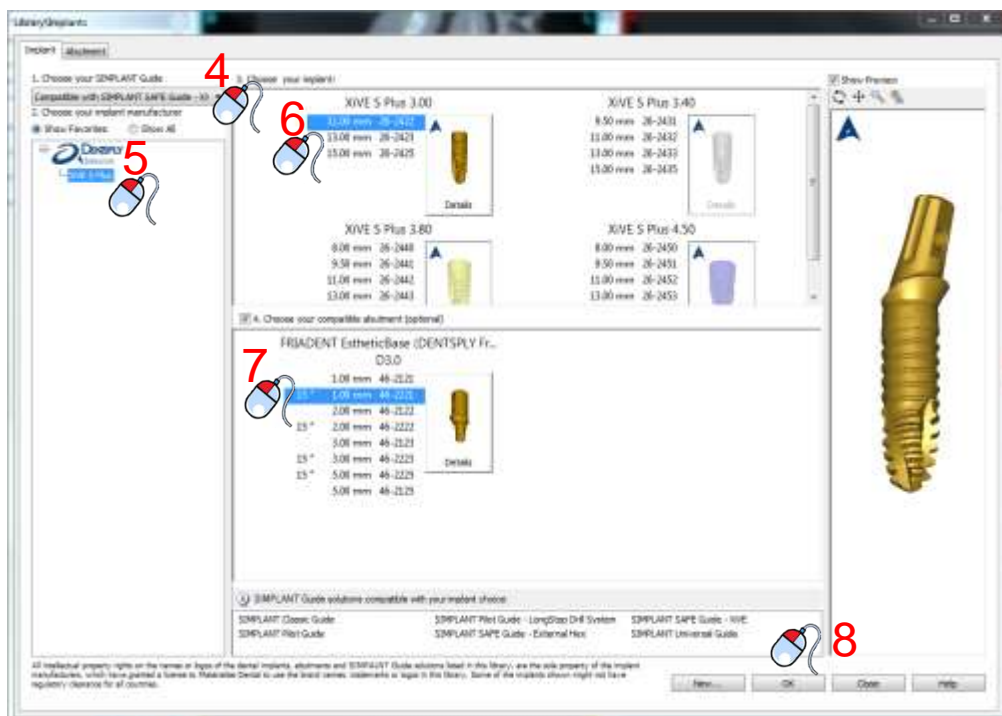


C. Specify the implant type

After you have placed the implant, you still need to specify the type of implant that you would like to use. To specify the implant type, first click somewhere on the implant surface to select it (1). In the Task Panel, select 'Match and specify selected implant' (2) followed by 'Specify implant' (3).

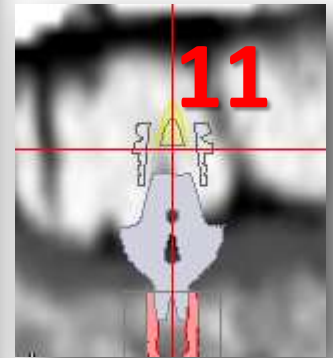
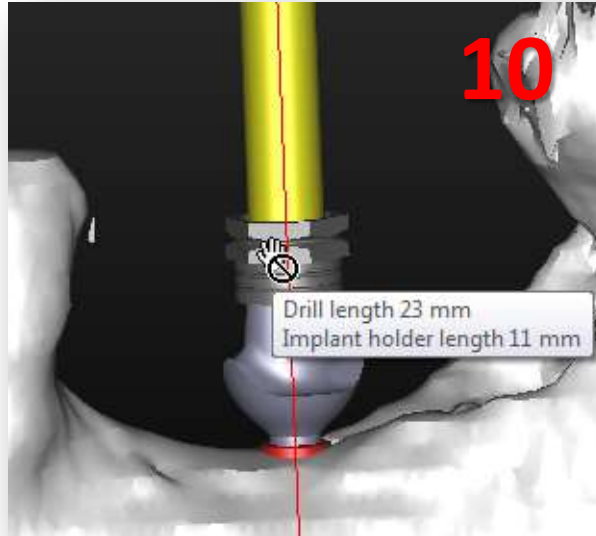
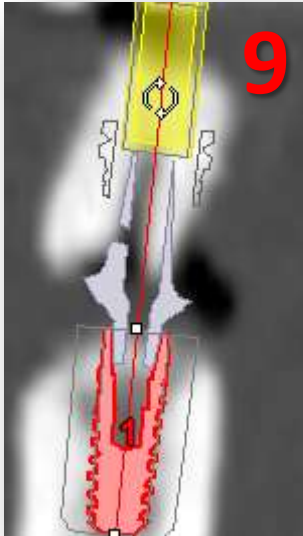


The 'Implants library' window now appears. Here you can select the specific type of implant that you would like to use. First, choose what type of SIMPLANT Guide you want to use (4). If you select a SIMPLANT Guide type you will see a preview of the guiding tubes in your planning. This can be a SAFE, Universal, Pilot or Classic guide. Then select the product line that you would like to use (5). Finally, select the implant that you would like to use (6), the abutment you would like to use (7), and click 'OK' (8) to make the changes effective in your planning.

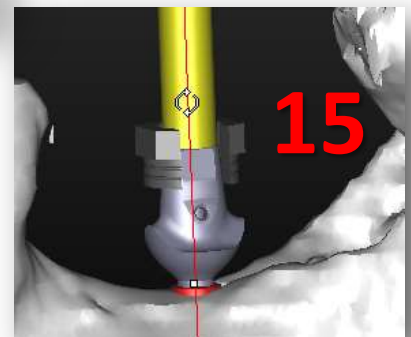
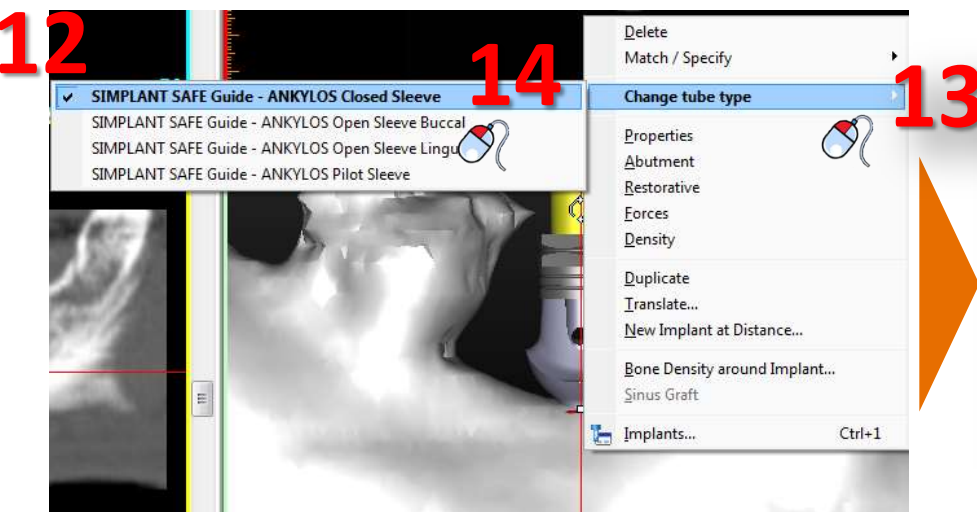




Because you have selected a SIMPLANT Guide type you will see a preview of the guiding tubes. You can see the position of the tube in the cross-sectional view (9), in the 3D view (10) and in the panoramic view (11). If you click on the tube in the 3D view as shown in (10) you will see a pop-up with information on drill length and implant holder length.

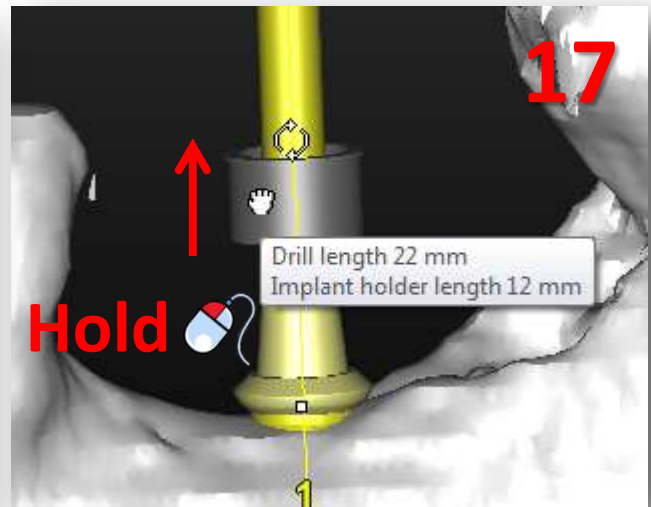
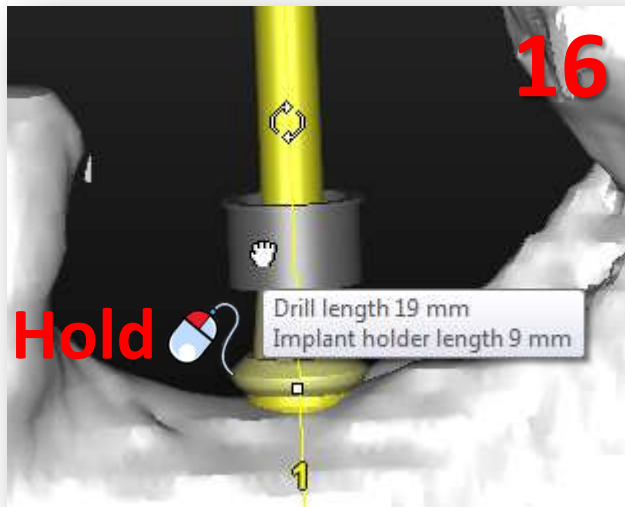


If you select a system with different tube types (ExpertEase or Universal) you can change this type by right clicking on the implant (12), clicking on 'Change tube type' (13) and clicking on a different tube type (14). You can see the open sleeve in (15).

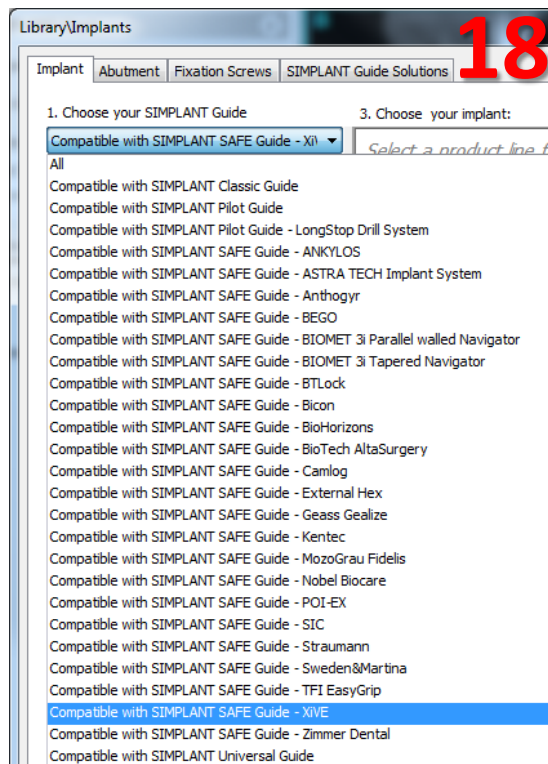




If we choose a system which allows different prolongations we can change the tube position. An example of such a system is Biomet Navigator. We can do this by clicking on the tube and holding the mouse button (16). Move the mouse up to move the guiding tube up (17).



Please remember: to see the tubes in your planning you have to select a SIMPLANT Guide type in the implant library window (18).



D. Change the position and length of the implant



During the planning, you might want to change the position or length of the implants. Three types of modifications to the implant can easily be made:

A Move the implant



B Rotate the implant



C Change the length of the implant



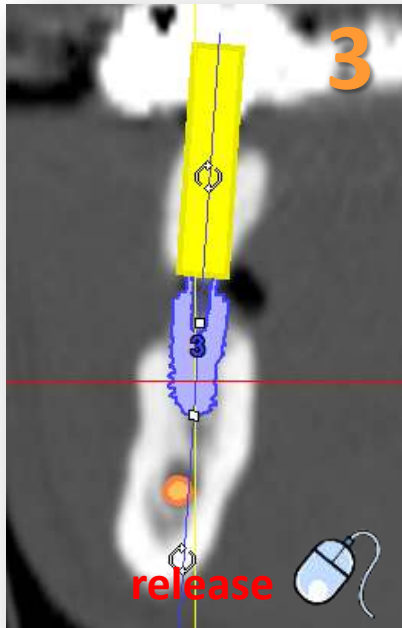
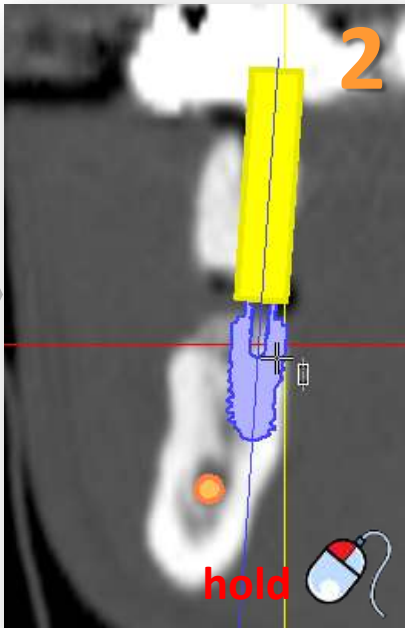
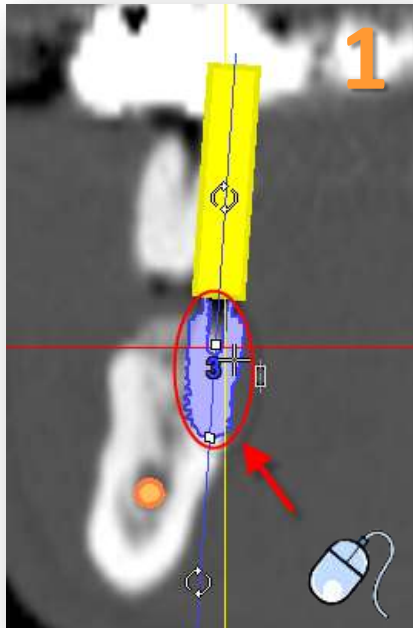
A. Move the implant



Position the mouse cursor on the implant area (1) until you see the move icon appear next to your mouse cursor:




Click and hold the left mouse button and move the mouse cursor to drag the implant to a new location (2). Release the mouse button to finish (3).



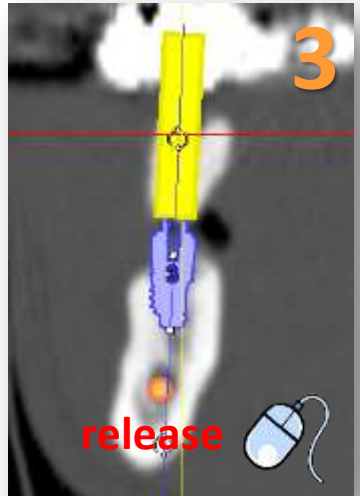
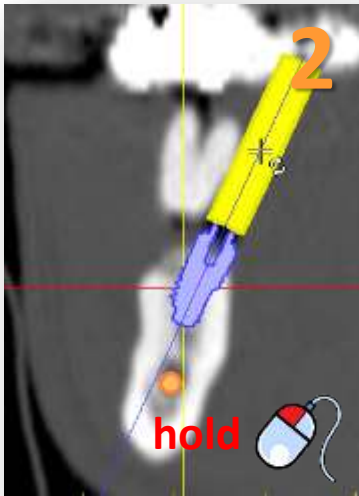
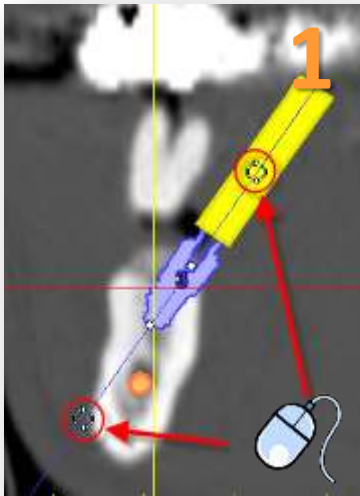
B. Rotate the implant



Position the mouse cursor on one of the two rotate icons (1)  until you see the rotate icon appear next to your mouse cursor:




Click and hold the left mouse button and move the mouse cursor to rotate the implant (2). Release the mouse button to finish (3).



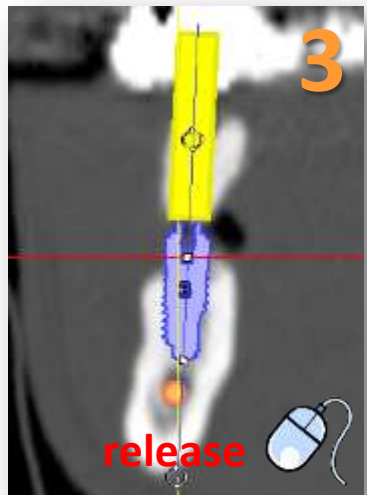
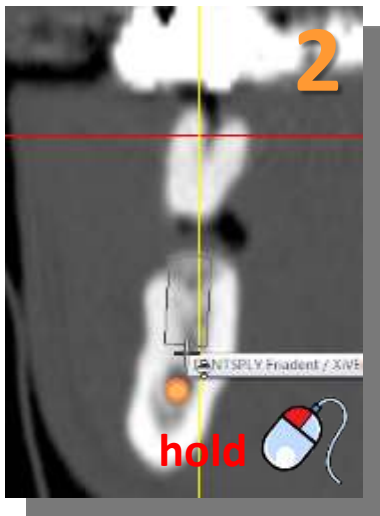
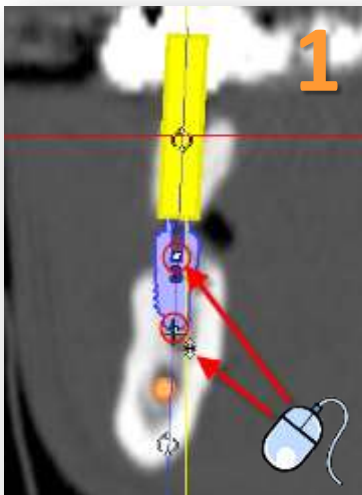
C. Change the length of the implant



Position the mouse cursor on one of the two following icons  (1) until you see the 'change length' icon appear next to your mouse cursor:



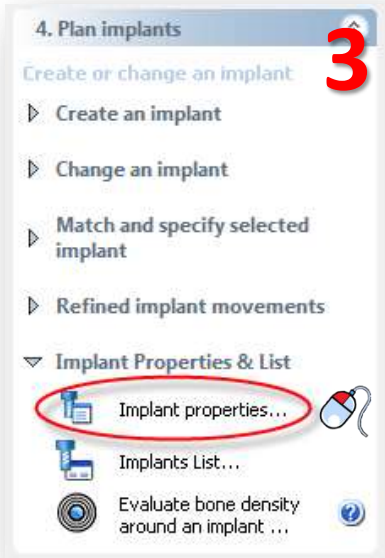
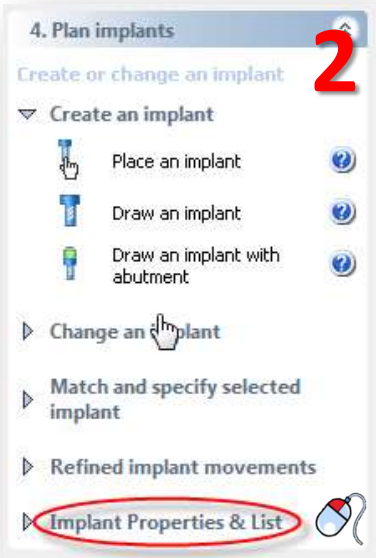
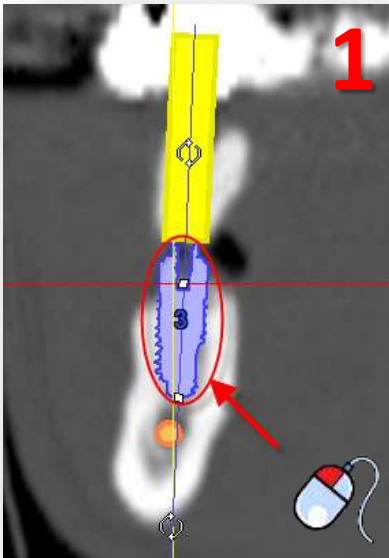
Click and hold the left mouse button and move the mouse cursor to change the length of the implant (2). Release the mouse button to finish (3). Notice that SIMPLANT automatically jumps to the next possible implant within the product line that you were using.



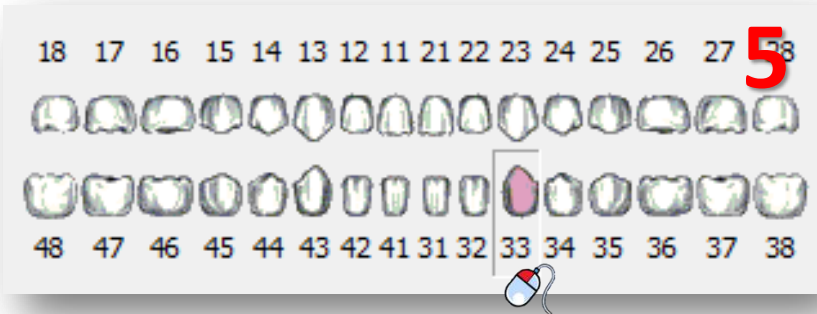
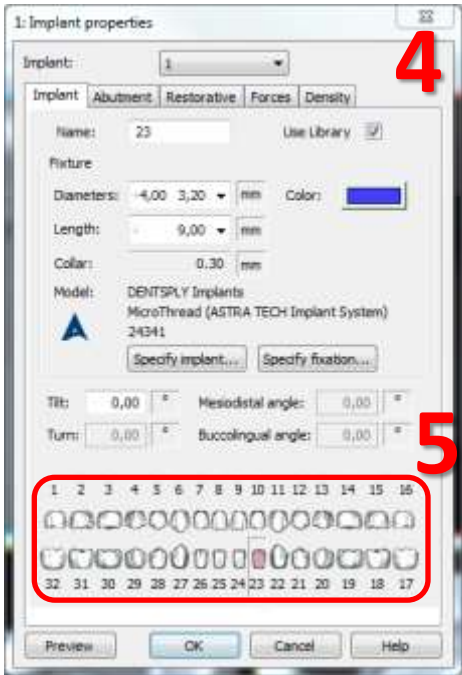
D. View the implant properties



After you have have created the implant you might want to review its properties. This can be done in the 'Implant properties' window. To open this window click with the left mouse button somewhere on the implant (1). In the Task Panel select 'Implant Properties & List' (2). Finally, select 'Implant Properties' (3).

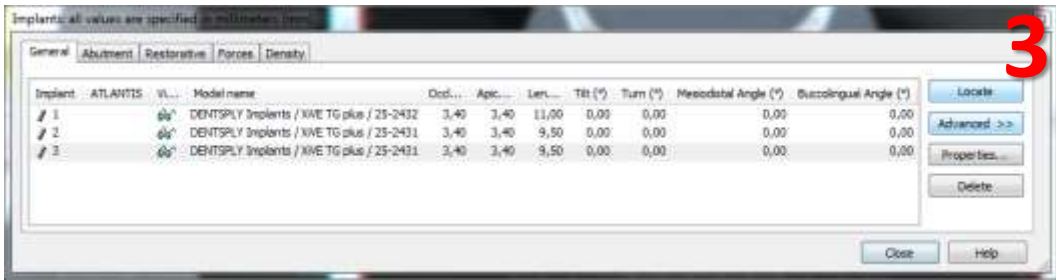
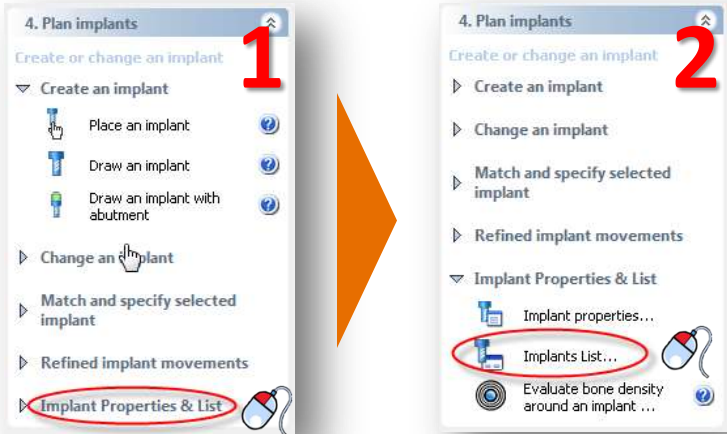


In the 'Implant properties' window (4) you can check the properties of the implant and change them if necessary. On the bottom of this window you can indicate at which tooth position the implant is located (5). This will also change the implant label and make it easy to find your implants in the planning.



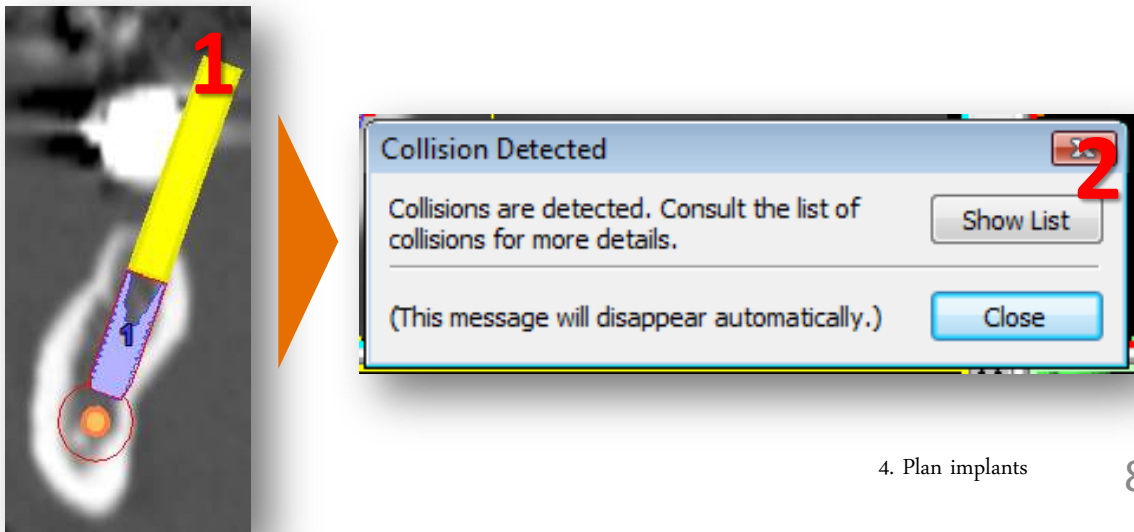
E. View the implants list

If you have placed many implants in one project, it can be useful to have an overview of all the implants. The *'Implants List'* provides such an overview. To access this list select *'Implant Properties & List'* in the Task Panel (1) followed by *'Implants List'* (2). This opens up the implants list (3)



F. Check for collisions

An important feature of the SIMPLANT software is the *'Collision detection'* function. When an implant collides with a nerve or another implant (1), a warning message automatically appears on your screen (2). The software also generates a list of all the collisions detected in your project.



5. Order SIMPLANT® Guide



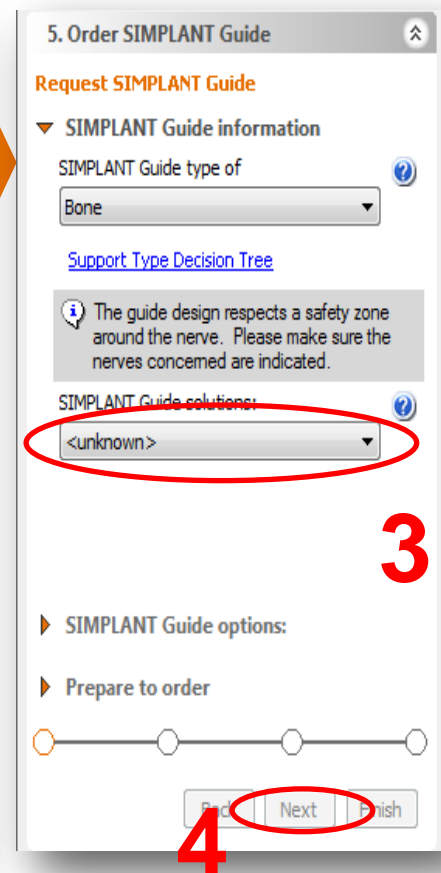
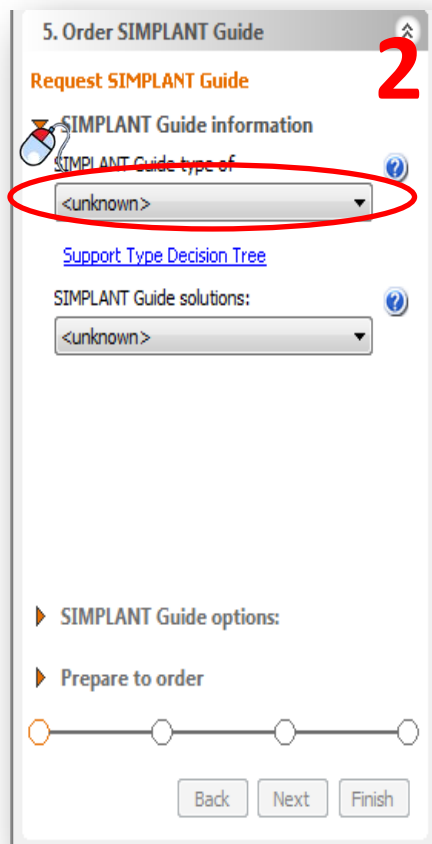
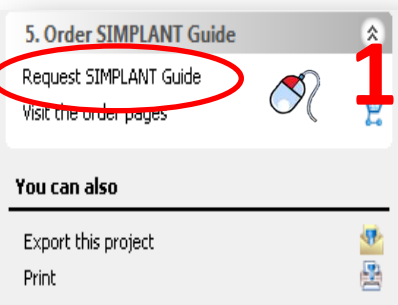
A The ordering of a SIMPLANT Guide consists of two steps:

A The design of the SIMPLANT Guide

B The ordering of the SIMPLANT Guide in the 'Online Shop'

A. The design of the guide

In the Task Panel select 'Request SIMPLANT Guide' (1). Select what type of support you would like to use: bone-, mucosa- or tooth-supported (2). SIMPLANT will now show you the possible SIMPLANT Guide solutions for the implants that you have placed. Select the SIMPLANT Guide solution that you would like to use (Classic or SAFE) (3) and click 'Next' (4).





If you have selected a SAFE SIMPLANT Guide as guidance type, you don't have to enter any drill diameters (5a). Click 'Next' to continue (5b).

Chosen SIMPLANT Guide Solutions: SIMPLANT SAFE Guide - XIVE

Include	Diameter	SIMPLANT Guide options:	Screw dia...	1st Ø (mm...	2nd Ø (m...	3rd Ø (mm...	4th Ø (mm...	5th...	..	Model name
<input checked="" type="checkbox"/>	1 3.00	SIMPLANT SAFE Guide - XIVE								DENTSPLY Implants / XIVE S Plus / 26-2422

5a

5. Order SIMPLANT Guide

Request SIMPLANT Guide

SIMPLANT Guide information

SIMPLANT Guide options:
For each implant choose the preferred guide option.

Prepare to order

Progress bar with 5 steps, step 2 is active.

Back

Next

Finish

5b



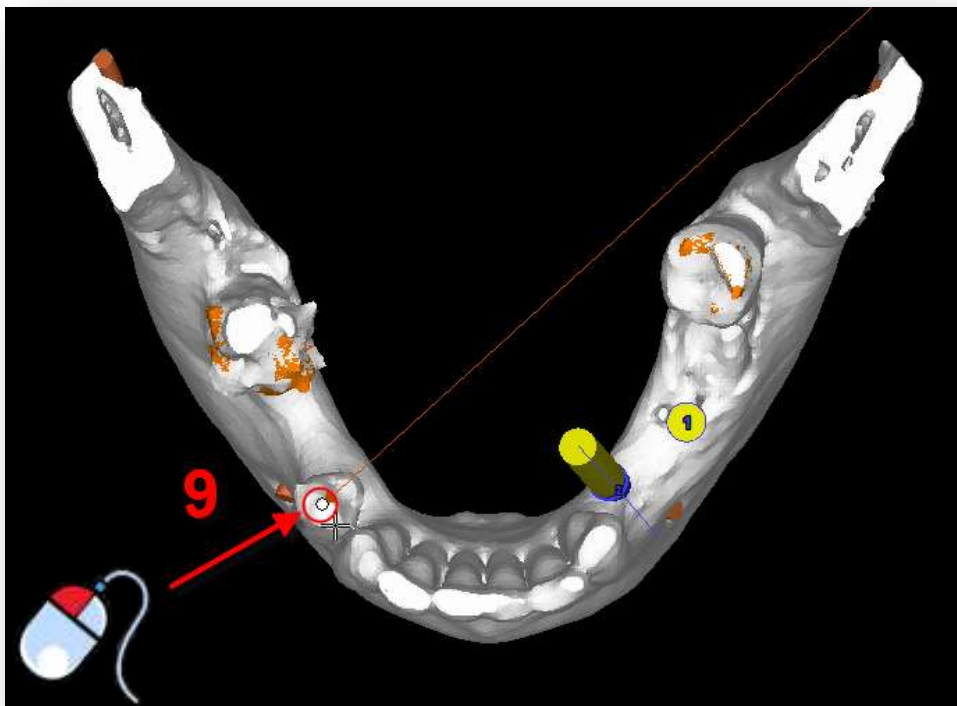
Select the type of order process that you would like to use: 'FastTrack' or 'Traditional' (6). Check the box next to "Tooth extractions needed" if you are planning on doing tooth extractions (7). Click 'Mark tooth' (8). In the 3D view, click with the left mouse button to mark the tooth that you are going to extract (9).

The image shows three sequential screenshots of the '5. Order SIMPLANT Guide' window, illustrating the steps to configure the order process and tooth extraction options.

Screenshot 1: The 'Order process' section shows 'FastTrack' and 'Traditional' options. 'Traditional' is selected and circled in red, with a red number 6 next to it.

Screenshot 2: The 'Tooth extractions needed' checkbox is checked and circled in red, with a red number 7 next to it.

Screenshot 3: The 'Mark tooth' button is circled in red, with a red number 8 next to it. Below the button, a warning message states: "Click these teeth on the 3D object if they are still present."





Check the box next to “*I want to add remarks*” if you would like to add some remarks (10). Type your remarks in the remarks area (11). Click ‘Next’ to continue (12).

5. Order SIMPLANT Guide

Request SIMPLANT Guide

► SIMPLANT Guide options:

▼ Prepare to order

Order process:

☐ FastTrack

☒ Traditional

☒ Tooth extractions needed:

Amount of extractions: Mark tooth 2

⚠ Click these teeth on the 3D object if they are still present.

☐ I want to add remarks

10

Order Choice

Back Next Finish

5. Order SIMPLANT Guide

Request SIMPLANT Guide

► SIMPLANT Guide options:

▼ Prepare to order

Order process:

☐ FastTrack

☒ Traditional

☒ Tooth extractions needed:

Amount of extractions: Mark tooth 2

⚠ Click these teeth on the 3D object if they are still present.

☒ I want to add remarks

remarks here

11

Order Choice

Back Next Finish

5. Order SIMPLANT Guide

Request SIMPLANT Guide

► SIMPLANT Guide options:

▼ Prepare to order

Order process:

☐ FastTrack

☒ Traditional

☒ Tooth extractions needed:

Amount of extractions: Mark tooth 2

⚠ Click these teeth on the 3D object if they are still present.

☒ I want to add remarks

remarks here

12

Order Choice

Back Next Finish



Check the box next to “*Create a preview of the guide*” if you would like to create a preview (13). Select the 3D model representing the bone (14). Click ‘*Show preview*’ (15). SIMPLANT now calculates a preview of the SIMPLANT Guide which is shown in the 3D view (16). Click ‘*Finish*’ to continue to the Online Shop (17).

4. Order SIMPLANT Guide

Request SIMPLANT Guide

▶ SIMPLANT Guide options:

▶ Prepare to order

▼ Order Choice

☐ Create a preview of the guide

☒ Order this guide now

Progress bar: 4 steps, step 4 is active.

Back Next Finish

4. Order SIMPLANT Guide

Request SIMPLANT Guide

▶ SIMPLANT Guide options:

▶ Prepare to order

▼ Order Choice

☒ Create a preview of the guide

Select the 3D object representing the Bone

S.	C	Name	Type
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Mandible	Bone
<input type="checkbox"/>	<input type="checkbox"/>	Teeth Mandi Tooth	
<input type="checkbox"/>	<input type="checkbox"/>	Prosthesis L: Prosthesis	
<input type="checkbox"/>	<input type="checkbox"/>	Prosthesis R: Prosthesis	

Preview:

Show preview

☒ Order this guide now

Progress bar: 4 steps, step 4 is active.

Back Next Finish

4. Order SIMPLANT Guide

Request SIMPLANT Guide

▶ SIMPLANT Guide options:

▶ Prepare to order

▼ Order Choice

☒ Create a preview of the guide

Select the 3D object representing the Bone

S.	C	Name	Type
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Mandible	Bone
<input type="checkbox"/>	<input type="checkbox"/>	Teeth Mandi Tooth	
<input type="checkbox"/>	<input type="checkbox"/>	Prosthesis L: Prosthesis	
<input type="checkbox"/>	<input type="checkbox"/>	Prosthesis R: Prosthesis	

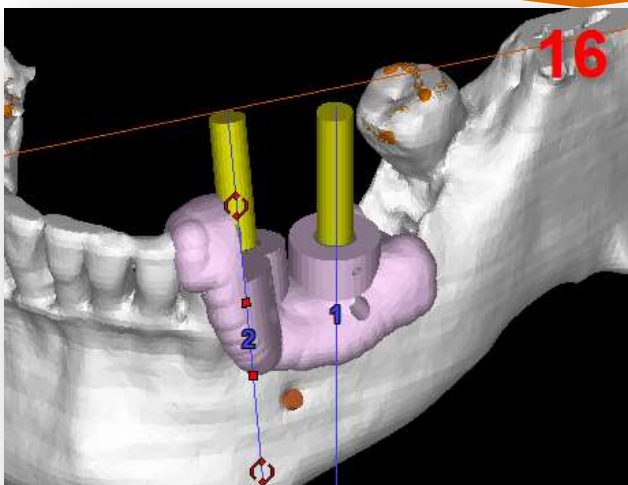
Preview:

Show preview

☒ Order this guide now

Progress bar: 4 steps, step 4 is active.

Back Next Finish



Preview:

Show preview

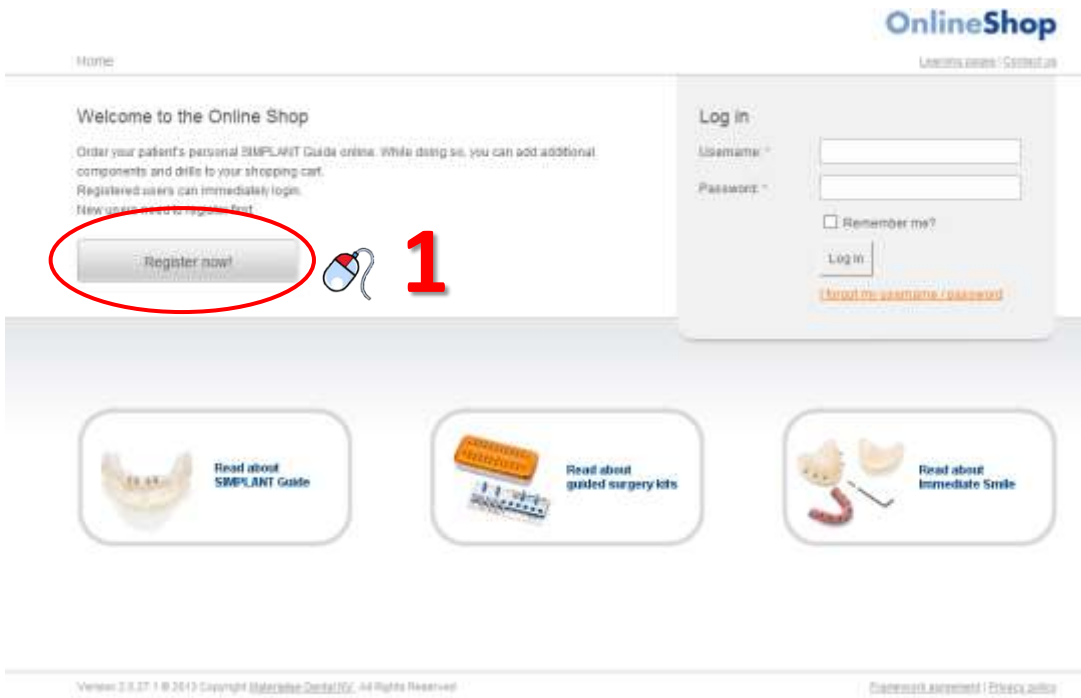
☒ Order this guide now

Progress bar: 4 steps, step 4 is active.

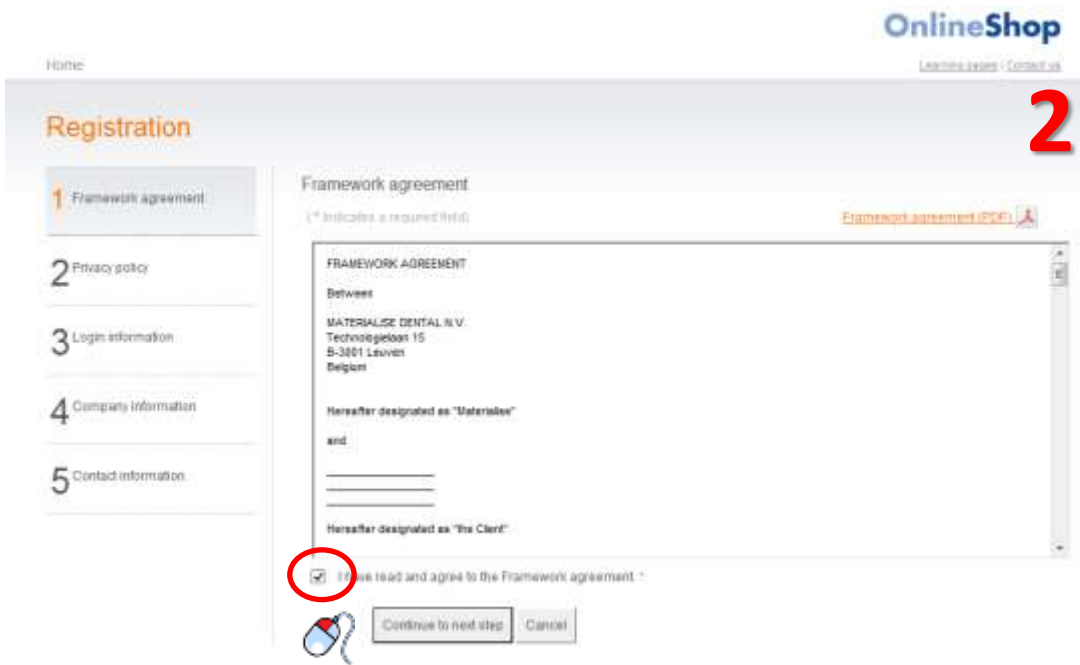
Back Next Finish

B. Ordering the guide

The SIMPLANT software now directs you to the Online Shop web page. If you are a new customer you will have to register first. Click 'Register now' (1).



The registration page appears (2). Check the box next to "I have read and agree to the Framework Agreement" and click 'Continue to Next step' to continue.



On the second registration page (3) check the box next to “I have read and agree to the Privacy policy” and click ‘Continue to Next step’ to continue.



OnlineShop

Home

Learning paths | Contact us

Registration

- 1 Framework agreement
Agreed
- 2 Privacy policy
- 3 Login information
- 4 Company information
- 5 Contact information

Privacy policy

(* indicates a required field)

[Privacy policy \(PDF\)](#)

PRIVACY POLICY

Effective Date: July 15, 2013

IMPORTANCE OF PRIVACY PROTECTION

MATERIALISE DENTAL, as the owner of the Products Ordering System, recognizes the importance of protecting your privacy and our policy is designed to assist you in understanding how your personal information is collected, stored, used, protected and safeguarded by MATERIALISE DENTAL. The Products Order can either be fully completed online by using the Software, or can be completed as an off-line version.

CONSENT

The Products Ordering System is operated by Materialise Dental RIV, Technologiestraat 15, 3001 Leuven, Belgium ("MATERIALISE DENTAL").

This Privacy Policy ("Privacy Policy") is a contract between you ("the User") and MATERIALISE DENTAL, and applies to your use of the Products Ordering System service and any related products and services available through the Product Ordering System (collectively "the Service").

☒ I have read and agree to the Privacy policy *

[Go back](#) [Continue to next step](#) [Cancel](#)

On the third registration page (4) enter your username and password. Click ‘Continue to next step’ to continue.

OnlineShop

Home

Learning paths | Contact us

Registration

- 1 Framework agreement
Agreed
- 2 Privacy policy
Agreed
- 3 Login information
- 4 Company information
- 5 Contact information

Login information

(* indicates a required field)

Username: *

Password: *

Confirm password: *

[Go back](#) [Continue to next step](#) [Cancel](#)

On the fourth registration page (5) enter your CCKey if you have one. If you don't have a CCKey, click 'I don't know my SIMPLANT CCKey' and fill out your company details. Then click 'Continue to next step' to continue.



Home Learning center | Contact us

Registration

1 Framework agreement
Agreed

2 Privacy policy
Agreed

3 Login information
Anneleentest

4 Company information

5 Contact information

Company information

(* Indicates a required field)

Find my company based on my SIMPLANT CCKey.

Benefits:

- You can use your vouchers immediately after registering.
- We can prefill your company details.

Please enter your SIMPLANT CCKey and press "Search".

- - -

[I don't know my SIMPLANT CCKey.](#)

On the final registration page (6) enter your contact information and click 'Finish registration' to continue. The Online Shop login web page now appears .



Home Learning center | Contact us

Registration

1 Framework agreement
Agreed

2 Privacy policy
Agreed

3 Login information
Anneleentest

4 Company information
test

5 Contact information

Contact information

(* Indicates a required field)

First name: *

Last name: *

Title:

Email: *

Phone: *

Language: *

Please select your language

Enter your username and password and click 'Login' to continue.
You are now directed to the first page of the Online Shop (7). You will see a list of what you are ordering. If you want to order additional components check the 'additional components' section below.



OnlineShop
[Learning pages](#) | [Contact us](#)

1 Product catalog 2 Shopping cart 3 Addresses 4 Payment 5 Summary 6 Place order **7**

Product catalog [To next step](#)

Products in your planning (indicative subtotal: EUR 225.00 Taxes excl.)
These products were found in your planning and will be ordered to the quantity you specify below. (All prices are taxes excl.)

Image	Description	Product Id	Indicative Price (EUR)	Quantity
	SIMPLANT SAFE Guide - XIVE & ANKYLOS This guide is designed for 1 implant IMPORTANT for XIVE TG implants; press 'More info...' more info...	SG-1-EE-1_1	225.00	1

Additional products (indicative subtotal: EUR 0.00 Taxes excl.) (All prices are taxes excl.)


Image	Description	Product Id	Indicative Price (EUR)	Quantity
	Immediate Smile model Everything the dental lab needs to fabricate a restoration for immediate loading. This additional product will change the shipment date of your order, no urgency possible. more info...	ISM	350.00	0 +
	Grafted model more info...	GM	250.00	0 +
	Jaw model more info...	JM	250.00	0 +
	Jaw model with coloured nerve more info...	INT_NC	300.00	0 +
	Jaw model with coloured teeth more info...	INT_TC	300.00	0 +

[To next step](#)


If you want to order an additional component, click the **+** sign (8) on the right of that component.
Click 'To next step' to continue.



You can order an ATLANTIS Abutment from the additional products list (9).
Click on the plus-icon to order an ATLANTIS Abutment (10).

Additional products (indicative subtotal: EUR 0.00 Taxes excl.)				
(All prices are taxes excl.)				
Image	Description	Product Id	Indicative Price (EUR)	Quantity
	ATLANTIS Abutment Patient-specific CAD/CAM Abutment for all major implant systems designed from the final tooth shape. Only single implant restorations allowed; i.e. no bridges. Local prices apply. more info...	ACA	0.00	0 +

You can now fill in all info needed to create the ATLANTIS Abutment (11). Select the implant or implants for which you want to order the ATLANTIS Abutment and select the tooth number from the dropdown list (12). You also have to select to which dental laboratory you want to send the pre-order (13).



ATLANTIS Abutment
Patient-specific CAD/CAM Abutment for all major implant systems designed from the final tooth shape. Only single implant restorations allowed; i.e. no bridges. Local prices apply.
[more info...](#)

ATLANTIS Abutments are not available in all countries. You can [contact DENTSPLY Implants](#) for the price and availability in your country.

1. Please indicate the implants for which you want to order an ATLANTIS Abutment and fill in the tooth number:

Implant name	Implant model	Tooth number *
<input checked="" type="checkbox"/> 11	DENTSPLY Implants / Ankylos CX / 3101 0420	<tooth nr.>

2. Please select the dental laboratory that will be assigned to the ATLANTIS Abutment order:

13 ☒ Previously used laboratory: * <Select laboratory>

☐ New laboratory: Name: *
Country: * <Select country of the laboratory>
State: *
City: *
Email: *

The ATLANTIS Abutment will now be ordered along with your SIMPLANT Guide.

When an ATLANTIS Abutment was ordered, it can be loaded in your SIMPLANT planning using the 'import ATLANTIS Abutment' functionality in the file menu.



You are directed to the second page of the Online Shop (14). Add some remarks if necessary.

OnlineShop
Learn more about us | Contact us

Product catalog

2 Shopping cart

3 Addresses

4 Payment

5 Summary

6 Place order

Shopping cart

To previous stepTo next step

Products in your shopping cart

Product Name	Product ID	Manufacturer	Indicative price (EUR)	Quantity	Indicative subtotal (EUR)
SIMPLANT SAFE Guide - XIVE & ANKYLOS	SG-1-EE-1_1	Materialise Dental	225.00	1	225.00
Handling Fee		Materialise Dental	30.00	1	30.00
Indicative total (Taxes excl.):					EUR 255.00

Planning details

Your order reference:

Support type: **Base-supported**

Please indicate if: ☐ This is a revised planning for a previously placed order. It replaces the order with order number (ID):

Remarks (Requests asking for adaptations or deviations from the normal design procedures may lead to an additional design fee)

14

Check that the invoice and delivery data are correct and click 'To next step' to continue (15).

OnlineShop
Learn more about us | Contact us

Product catalog

Shopping cart

3 Addresses

4 Payment

5 Summary

6 Place order

Addresses

To previous stepTo next step

Invoice & delivery address

[Edit address & contact info](#)

Order placed by:

Invoice to:

Materialise Dental Distr
Technologiestraat 15
3001 Leuven
Belgium
VAT ID n°: None

Deliver to:

Vandersmissen Annelien
Email: annelien.vandersmissen@materialise.com
Phone: +3218396655

Materialise Dental Distr
Technologiestraat 15
3001 Leuven
Belgium

15



The Scheduling & Payment page of the Online Shop is now shown (16). Click the 'The surgery is already scheduled.' box to select an intervention date.

OnlineShop
[Learn more](#) | [Contact us](#)

1 Product catalog

2 Shopping cart

3 Addresses

4 **Payment**


5 Summary

6 Place order

Scheduling & Payment

[To previous step](#) [To next step](#)

Earliest possible shipment date

Earliest possible shipment date: **26 Sep 2013** 
will shift if all required information does not arrive today at Materialise Dental.

☐ The surgery is already scheduled. If needed, process order with urgency (not always possible).

Payment method

☐ Use voucher:

Payment remarks:

16

The final page of the Online Shop is shown (17). Review the summary, and check the box to agree with the 'limitation of liability' and click 'Place order' to finalize the procedure.

After the order is uploaded to our server, an order confirmation is shown.

17

Limitation of liability

Materialise Dental N.V. is liable as a supplier of products. Since the circumstances in which these products are ordered and used are under control of the buyer, the latter recognizes his responsibility for these circumstances. On these grounds the remedies of the buyer are limited as follows:
The liability of Materialise Dental N.V. for real and proven damages will, regardless of the gravity of the failure, except in case of fraud, be limited to the price of the product directly related to the reason of the claim.
Under no circumstances an indemnity can be grounded on indirect damages such as, but not limited to, loss of revenue, increase of expenses, disturbance of planning, loss of customers or goodwill, loss of benefits or expected savings or any other financial or commercial losses which are not a direct and immediate consequence of a shortcoming of Materialise Dental N.V. in its obligations.
Buyer agrees to control the conformity of any delivered product with his order, before using it. Should buyer omit to perform such control or decide to nevertheless use a non conformable product, he frees Materialise Dental N.V. from any liability for the consequences of the use of such product.
The Client hereby represents and warrants that he has requested and received the duly informed consent of the patient to use its private and medical information during the ordering and delivery process of the SIMPLANT Guide, in compliance with all applicable laws, including any applicable privacy regulations.

☒ Anneleen Vandermissen, hereby requests the manufacturing of a SIMPLANT Guide by Materialise Dental, in accordance with this pre-operative surgical plan. *

If you are the end user of the SIMPLANT Guide, you declare having the qualifications required by law to perform the planned intervention and take full medical responsibility for the design and the use of the SIMPLANT Guide. You further agree to the terms and conditions of the [framework agreement](#), [privacy policy](#), the SIMPLANT Guide guidelines and the provisions stated above.

If you are a third party acting on behalf of the end user, you hereby confirm and guarantee towards Materialise Dental that you have been granted a legal power of attorney by the end user to make this order, that the end user has the qualifications required by law and that the end user agrees to the terms and conditions of the [framework agreement](#), [privacy policy](#), the SIMPLANT Guide guidelines and the provisions stated above.

[To previous step](#)

[Place order](#)

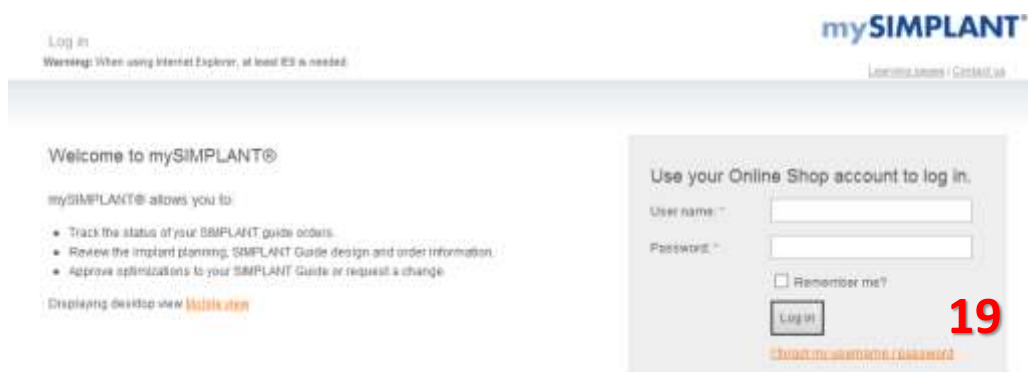


You will receive a confirmation e-mail when we receive your order. You can follow-up on your orders on our website 'MySIMPLANT.com'. You can access the site by clicking on the link on the left hand side of the online shop (18).

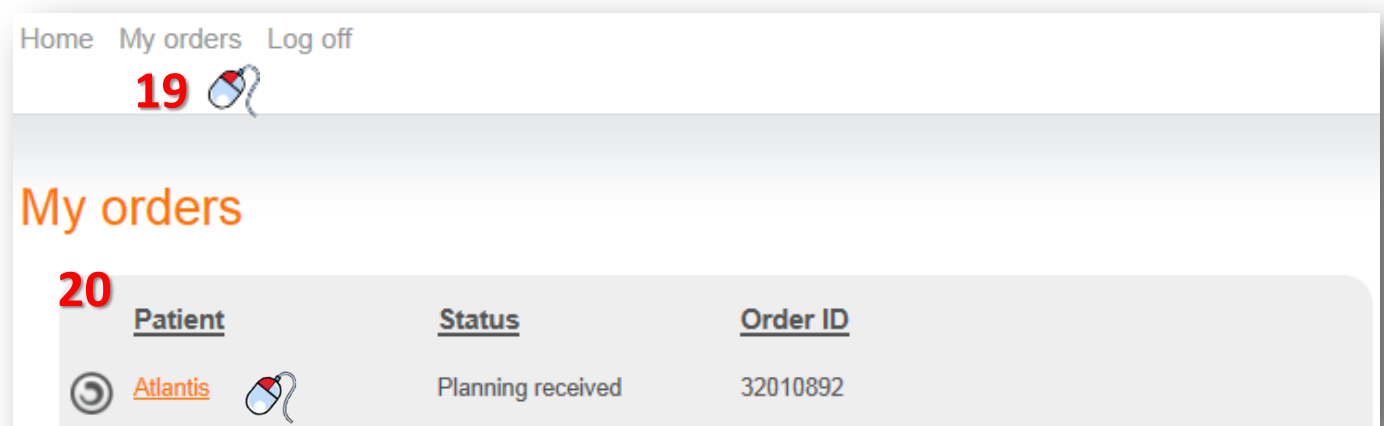


The website 'MySIMPLANT.com' will open in your browser and you have to log in with your Online Shop account. (19).

You can also access 'MySIMPLANT.com' on your mobile device!



You can now see the status of your order by clicking on 'My Orders' in the menu (19). Then you select the planning of which you want to check the status by clicking on the patient name (20).





Now you can see more details about the status of your order. When we need your approval because we applied some minor changes to your order the status of your order will be 'Approval Required'. You can give your approval directly through 'MySIMPLANT.com' (21).

Atlantis - Approval required

General

Order ID: 32014139
Guide: SIMPLANT SAFE Guide - Camlog

Design service feedback

Implant planning and Guide design

Images and files are stored for 3 months after the order is placed.

- Images: This order has no images.
- SimPlant files, surgical protocol and possible other design files:

[Order 32010892.sof](#)

Approve or request a change

Remarks:

21

Approve

Change



6. Share your cases



You can share your case with referrals, dental technicians, colleagues and yourself by making a planning available for review on our iPad app, SIMPLANT Team-Up!.

We will explain the 4 buttons:

- A. Share the current project
- B. View shared cases
- C. View case communication
- D. Activity Stream



A. Share the current project.

To share the project that you are working on click on the “*Share current project*” button (1).



Log in with your Online Shop account (2).

2



Once you are logged in you will see the “*Share Case*” screen (3). You can add comments to your case (4). The information about the project is shown under ‘*Plans*’ (5). Check if this information is correct before sharing your case.

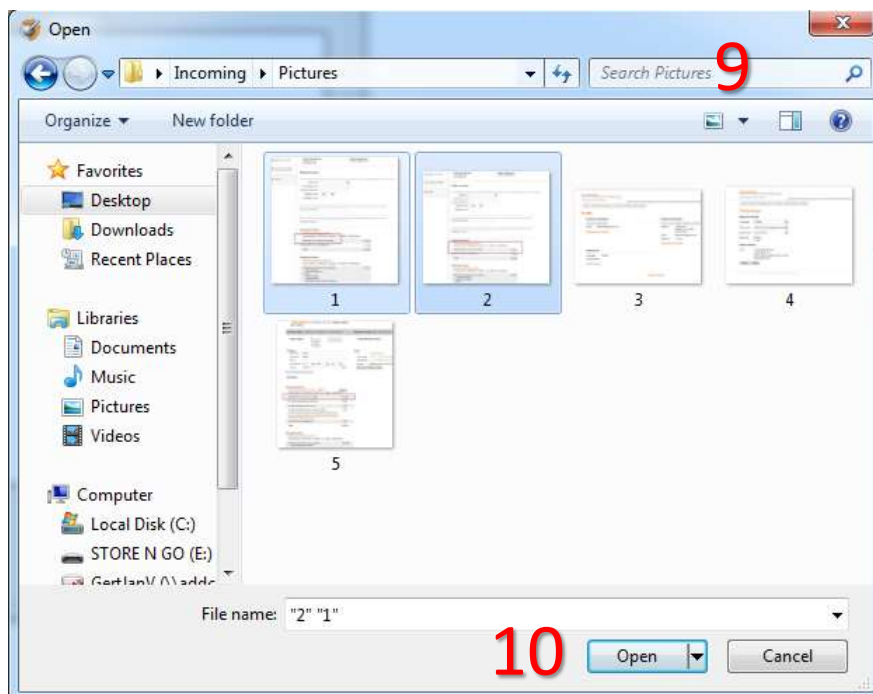
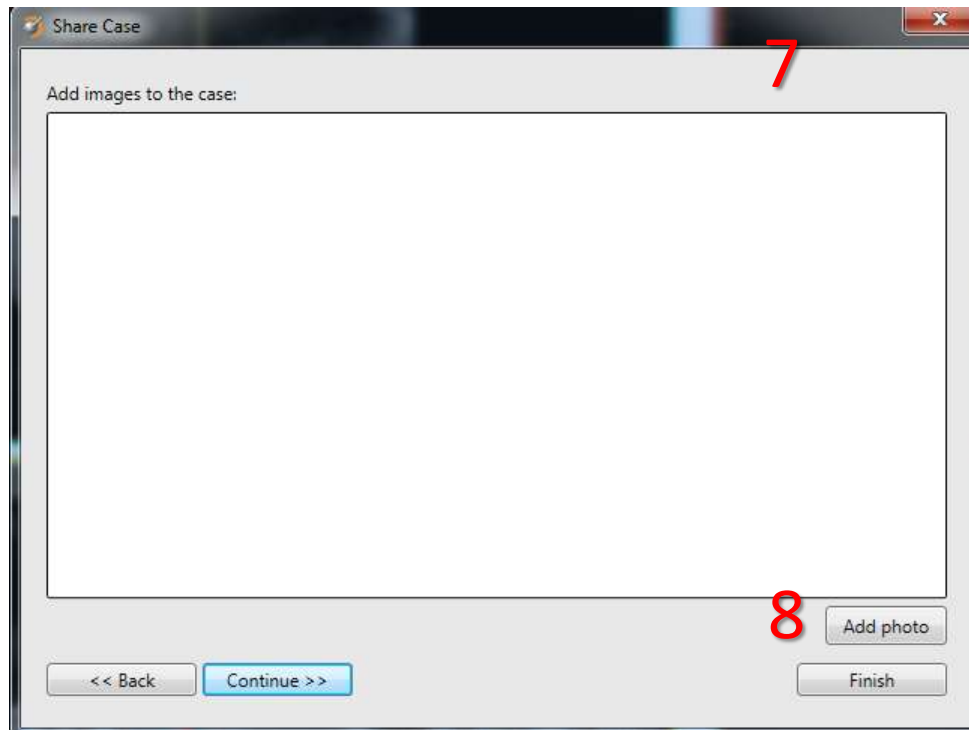
The screenshot shows a window titled "Share Case" with a close button (X) in the top right corner. The window contains the following elements:

- Name:** Atlantis (labeled with a red 3)
- Comments:** A text area containing "n/a" (labeled with a red 4)
- Plans:** Two buttons: "Maxilla Implants: 1" and "Mandible Implants: 0" (labeled with a red 5)
- Navigation:** Three buttons at the bottom: "<< Back", "Continue >>" (labeled with a red 6), and "Finish"

Click ‘*Continue*’ to go to the next step (6).

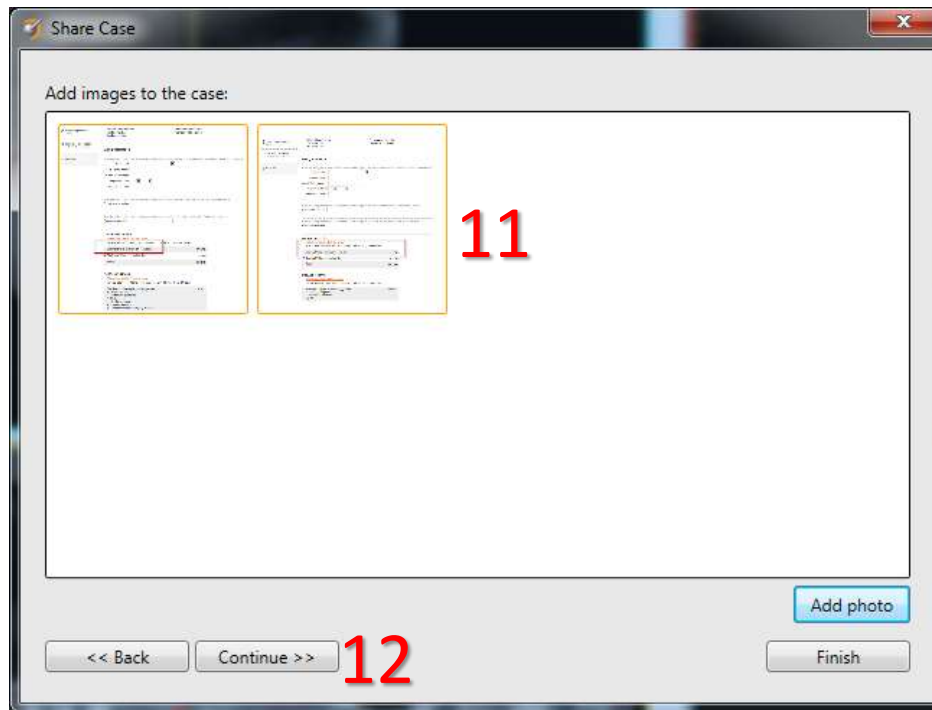


On the next screen you can add images to the case (7). These will be viewable on the iPad app. To add images click the 'Add Photo' button (8). Select one or more photos in the 'Open File' Dialog (9) and click the 'Open' button (10).

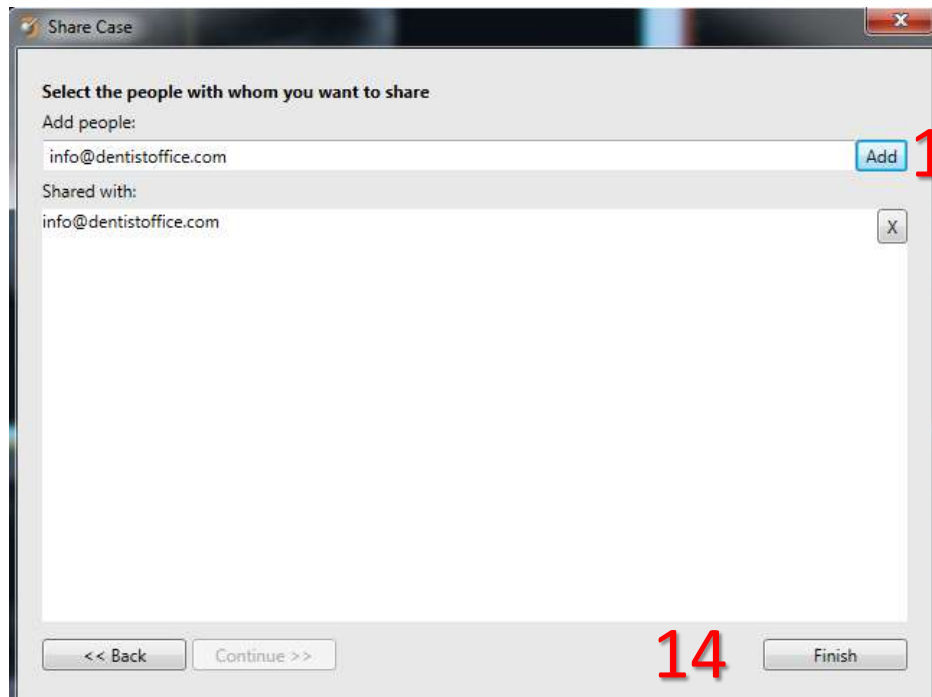




The images will be added to the case (11). Click 'Continue' (12) to go to the next step.

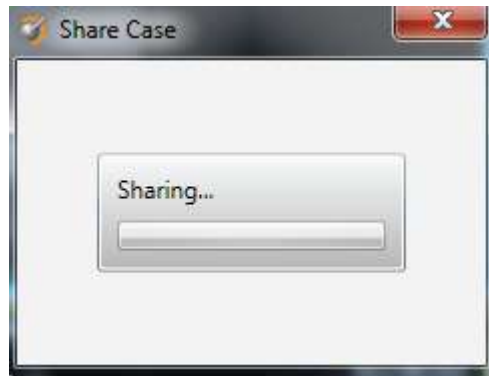


On the next screen you can select the people with whom you want to share the case. Enter their e-mail address and click 'Add' (13). You can add as many people as you want. Click 'Finish' to share the case (14).



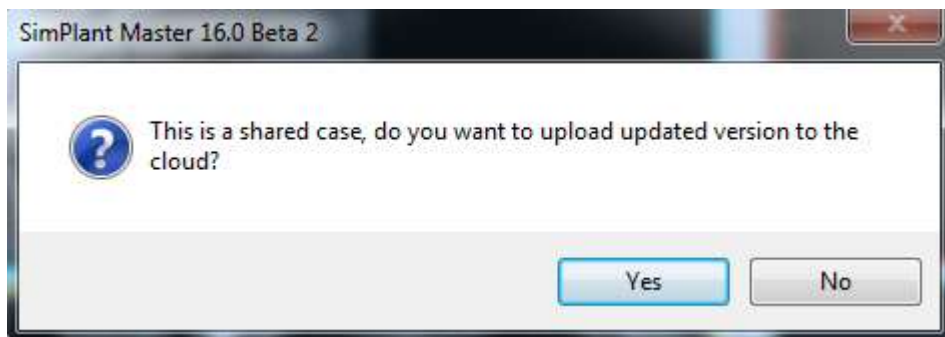


The case will be uploaded to the server so it will be available on the iPad app (15).



15

If you change something to your planning and save the planning, SIMPLANT will ask if you also want to apply these changes to the shared case (16). If you choose Yes the planning will be uploaded again with your changes.



16

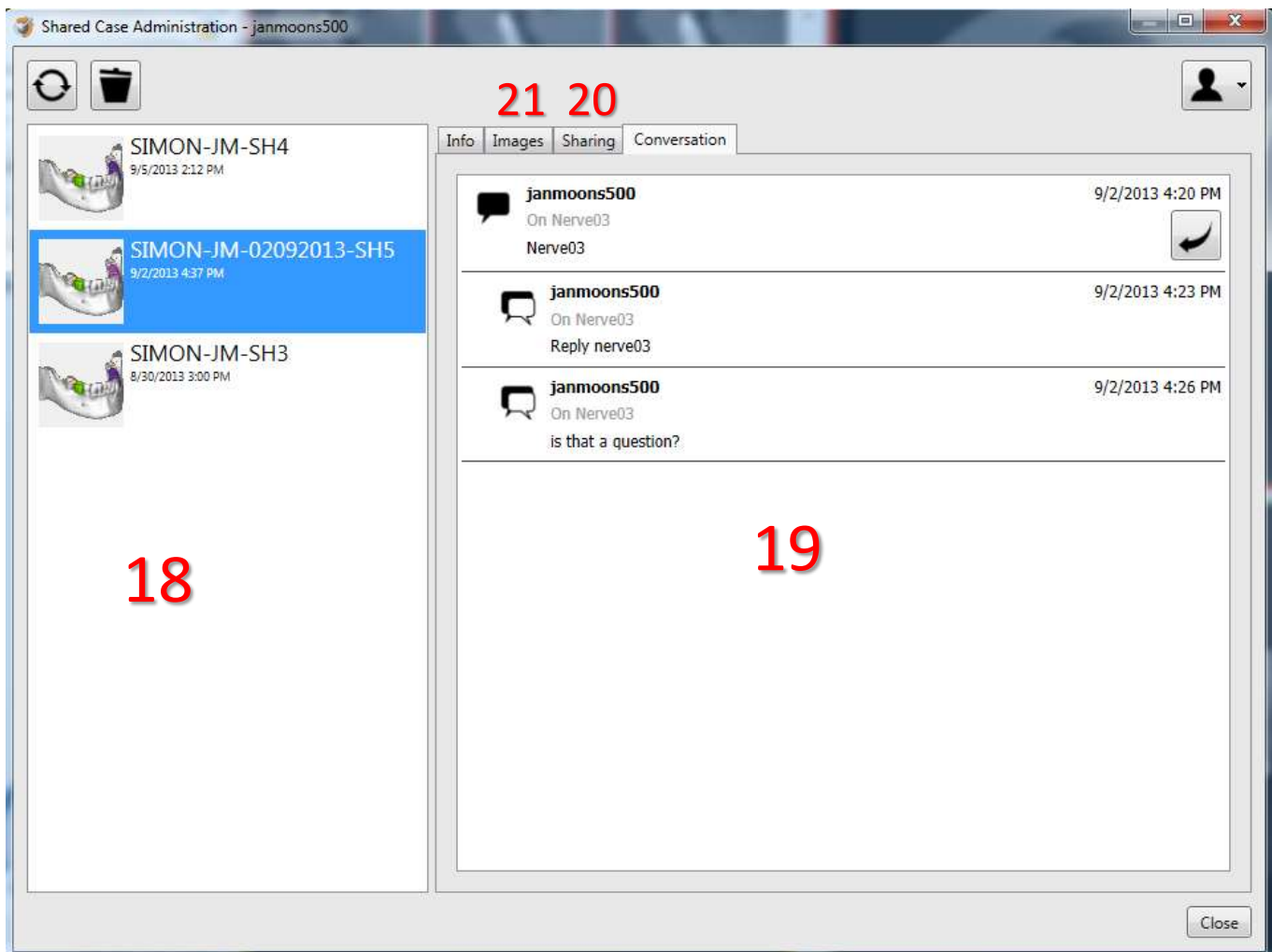


B. View shared cases

Once the case has been uploaded the *'Share Case'* button will be disabled. You can click on the *'Show shared cases'* button to view all the cases you have shared (17).



Here you have an overview of all cases you have shared with your referrals, dental technicians and colleagues (18). You can select each of them and view the comments (19) and the images that have been shared (20). On the *'Sharing'* tab (21) you can add or remove people.



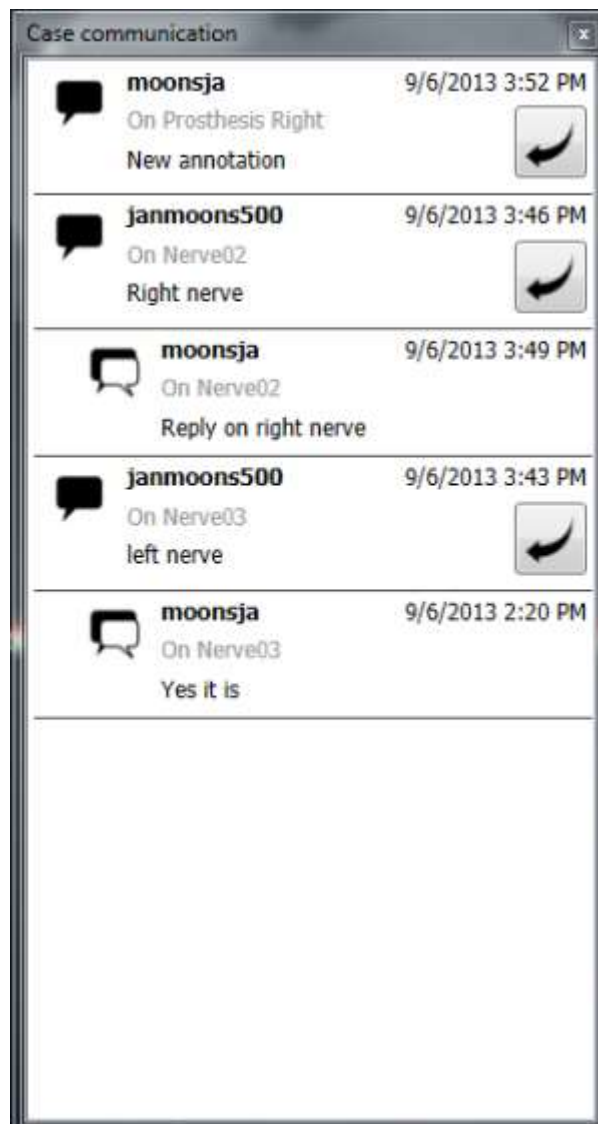


C. Show the case communication

You can see the comments of your colleagues by clicking on the '*Communication*' icon (20).



On this screen you can see who made notes in the iPad app about the case (21).



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